CONESTOGA-ROVERS & ASSOCIATES

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SUB-SLAB DEPRESSURIZATION SYSTEM OPERATION, MAINTENANCE, & MONITORING (OM&M) PLAN

SOUTH DAYTON DUMP AND LANDFILL
MORAINE, OHIO

Prepared for: Bullseye Amusement
2003 Dryden Road
Moraine, Ohio 45439
Parcel No. 5172, Building 14

Conestoga-Rovers & Associates
14496 Sheldon Road, Suite 200
Plymouth, Michigan 48170

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Section 1.0 Introduction

On behalf of the Respondents to the Administrative Settlement Agreement and Order on Consent for Removal Action (ASAOC) with United States Environmental Protection Agency (USEPA), Docket No. V-W-13-C010 (Respondents) dated April 5, 2013, effective date April 8, 2013, Conestoga-Rovers & Associates (CRA) has prepared this Operation, Maintenance, and Monitoring (OM&M) Plan for the Sub-Slab Depressurization System (SSDS) installed at Bullseye Amusement (Bullseye) located at 2003 Dryden Road, Building 14 in Moraine, Ohio. The SSDS was installed in Bullseye between November 18 and January 7, 2014 at the request of the USEPA following a review of volatile organic compound (VOC) analytical data from the January, March and August 2012 vapor intrusion (VI) investigation activities at, and adjacent to, the South Dayton Dump and Landfill Site in Moraine, Ohio (Site). The design and installation of the SSDS was successfully completed consistent with the USEPA-approved VI Mitigation Work Plan (VIMWP) dated May 2013 with the minor modifications discussed herein. This OM&M Plan presents information regarding the SSDS system design, installation, layout, maintenance, monitoring, inspections, and sampling requirements necessary to ensure normal and proper operation of the SSDS.

Section 2.0 Site Background and Previous Vapor Investigations

The Site is located at 1901 through 2153 Dryden Road (sometimes called Springboro Pike) and 2225 East River Road in Moraine, Ohio. The Site is bounded to the north and west by the Miami Conservancy District floodway (part of which is included in the definition of the Site), the Great Miami River Recreational Trail and the Great Miami River (GMR) beyond. The Site is bounded to the east by Dryden Road with light industrial facilities beyond, to the southeast by residential and commercial properties along East River Road with a residential trailer park beyond, and to the south by undeveloped land with industrial facilities beyond.

The approximately 80-acre Site is a former disposal site and includes areas where municipal, industrial, and residual wastes and construction and demolition debris were disposed. The Bullseye facility is located on the Site.

CRA completed the 2012 VI Investigation as an interim response action pursuant to Paragraph 37(c) of the ASAOC for Remedial Investigation/Feasibility Study (RI/FS) of the Site, Docket No. V-W-06-C-852 (ASAOC). The VI Investigation was required under Paragraph 4 of the December 10, 2010 Dispute Resolution Agreement signed by the Respondents and the USEPA. A copy of the August 2006 Bullseye Site Access Agreement is included as Appendix A.

CRA collected 14 soil vapor samples from three permanently installed sub-slab soil vapor probes and seven indoor air samples at Bullseye in January, March, and August 2012. Trichloroethylene (TCE) was observed to be present in the sub-slab at a concentration as high as 36 parts per billion by volume (ppbv), which is greater than the Ohio Department of Health (ODH) sub-slab TCE screening level of 20 ppbv. In addition, TCE was observed in the indoor air at a concentration as high as 0.080 ppbv, which is less than the Agency for Toxic Substances and Disease Registry (ATSDR) and ODH indoor air TCE screening level of 2 ppbv. Historic sub-slab sampling data is provided in Table 1, and historic indoor air data is provided in Table 2.

Section 3.0 SSDS Objectives and Targets

The primary objective of the SSDS design and installation was to establish a negative pressure field extension beneath Bullseye that would effectively minimize the potential for VI of VOCs from sub-slab soils into indoor air. It is noted that to the extent that indoor air background sources of VOCs may be present in Bullseye or in the ambient air unrelated to VI, the SSDS was not designed to address these background indoor air sources.

Installation of the SSDS was conducted in general accordance with the following guidance documents:

- ASTM guidance *Standard Practice for Installing Radon Mitigation Systems in Existing Low-Rise Residential Buildings* (ASTM E2121-03)
- U.S. EPA guidance *Radon Reduction Techniques for Existing Detached Houses: Technical Guidance for Active Soil Depressurization Systems*, 1993
- U.S. EPA guidance *Indoor Air Vapor Intrusion Mitigation Approaches*, 2008

The generally accepted target range for depressurization is 4 to 10 pascals or 0.0161 to 0.04 inches of water column (in.wc) (U.S. EPA 2008) with a nominal continuous operating range of depressurization from 0.025 to 0.035 in.wc for standard permeability sub-slab material. However, differential pressures as low as 0.001 in.wc are sufficient to effectively depressurize a sub-slab (U.S. EPA 1993). If the digital manometer shows a vacuum reading of negative 0.004 in.wc below the slab, then that indicates that the active system is successfully depressurizing the sub-slab area across the footprint of the building. Alternatively, successful operation of the SSDS can be demonstrated if sub-slab sampling indicates that sub-slab concentrations of the contaminants of concern have been effectively reduced by the SSDS to levels that are less than the ODH sub-slab screening levels.

Section 4.0 SSDS Description

The Respondents retained Environmental Doctor, an Ohio Department of Health licensed radon contractor, to install the SSDS. Environmental Doctor installed the SSDS at Bullseye between November 18 and January 7, 2014. A total of two systems (EP-1 and EP-2) were installed. A stemline was added to EP-1 to improve vacuum. EP-2 and EP-1 stemline were design changes, and they were added after the noncompliant monitoring event on December 12, 2013 to improve vacuum readings under the sub-slab. Drawing 1 provides the layout and as-built diagram of the SSDS, including the suction, vacuum monitoring, and compliance points utilized during SSDS installation and start-up. A copy of the May 2013 Bullseye Vapor Abatement System Acceptance Form is included as Appendix B. Photographs of the SSDS during and after installation are provided in Appendix C.

4.1 Suction Points

The three suction points (EP-1, EP-1 stemline, and EP-2) were installed using 3-inch diameter Schedule 40 polyvinyl chloride (PVC) piping. Each suction point location was installed by coring a 4-inch diameter hole through the floor and concrete slab. The concrete slab had an average thickness of 3.75-inches, and the sub-slab soil was excavated to create a void approximately 13-inches deep below the concrete slab. The sub-slab soil was poorly graded gravel with round and sub-angular cobbles and coarse to medium grained sands. The suction point piping was then sealed to the floor using waterproof silicone caulk. Each suction point extended vertically from the floor through the exterior wall to a 3-inch diameter PVC piping manifold. The PVC piping manifolds were sloped to each of the suction points such that any potential water condensate that accumulates during the SSDS operation would drain back beneath the sub-slab.

4.2 Vacuum Monitoring Points

During the installation of the SSDS, one vacuum monitoring point (SS-14-E) was installed to collect vacuum measurements from the sub-slab during the SSDS startup. Vacuum monitoring point (SS-14-D) was abandoned because concrete slab conditions promoted water drainage into the vacuum monitoring port making sampling at this location not possible. CRA measured the vacuum at three sub-slab sampling probes (SS-14-A through SS-14-C) and one vacuum monitoring point (SS-14-E) on January 24, 2014 after EP-2 and EP-1 stemline were installed to evaluate the vacuum under the sub-slab. USEPA approved a hybrid proficiency sampling plan that included sub-slab soil gas sampling from two sub-slab sampling probes in addition to the indoor samples. The probe locations SS-14-A and SS-14-C were selected because SS-14-A has the highest exceedance values of TCE historically, and SS-14-C is located nearest to an occupied office.

During the OM&M activities at Bullseye, hybrid proficiency sampling plan will be implemented for the annual compliance sampling.

4.3 Blowers and Exhaust Stacks

The high-suction fans, identified as EP-1 and EP-2, are Fantech HP 220 high-suction/high-flow exhaust blowers and RadonAway GP501 high-suction/low-flow exhaust blowers, respectively. These blowers are connected to each of the two PVC piping manifolds to provide vacuum to individual vapor suction points. Each exhaust blower was mounted externally, approximately 4 to 6 feet above adjacent street level. The PVC piping manifold penetration points through the exterior wall of Bullseye were sealed on the inside of the building. Exhaust stacks are connected to each blower near roof level and are constructed of 4-inch diameter PVC piping that extends approximately 2 feet above the roof line. Details regarding the RadonAway fans are provided in Appendix D.

During the OM&M activities at Bullseye, vacuum measurements will be collected from each fan. Vacuum should range from 0.5 to 4 in.wc.

4.4 Effluent Sample Ports

In order to monitor vacuum readings and conduct effluent air sampling, sample ports were installed in the PVC piping manifold upstream of each blower as well as on the discharge side of the blower. The sample ports consist of a sealed barbed fitting installed in the PVC piping.

4.5 Electrical System Operation

Prior to installation, the electrical system design plans were submitted to the City of Moraine's Building and Zoning office for review, approval, and the issuance of the appropriate permits and licenses. Consistent with the requirements of the permit from the City of Moraine, each component of the electrical system is inspected and approved. The final inspection report is provided in Appendix D. The electrical system is interconnected to Bullseye's main electrical panel such that if Bullseye loses power, the SSDS also will lose power and will require the owner/operator to re-activate the system using the manual restart switch.

In accordance with the applicable local and national electric code, the SSDS was installed by branching the main electrical service in Bullseye to a sub-panel next to each blower exhaust fan. The sub-panel and electrical components are appropriately secured to the exterior wall. In the event that maintenance or inspection checks require the shutdown of the system, the sub-panel electrical system for the SSDS has a primary disconnect switch to disconnect all of the electrical power supply to the SSDS sub-panel. Each inline blower exhaust fan is electrically

connected to an individually secured single circuit breaker switch. To deactivate a single blower exhaust fan, the circuit breaker box is opened and the switch is turned to off, which disconnects the power to the blower fan.

Section 5.0 SSDS Operation, Maintenance, and Monitoring

In June 2014, CRA completed the required 180-day proficiency sampling and OM&M inspection of the SSDS to verify that the system is operating as designed. In December 2014, CRA will also complete the required 365-day proficiency sampling. Upon completion of the December 2014 OM&M event, CRA will continue to perform routine inspections on an annual basis to ensure the SSDS is operating properly, beginning December 2015. A summary of the post mitigation radius of influence and the summary of the 30-day proficiency sampling can be found in Table 3 and Table 4, respectively.

Routine inspections of the SSDS to be completed by CRA staff will include:

- Inspect the blower, including checks for unusual noise or vibration
- Collect vacuum measurements from the blower to ensure the system is operating in the design range
- Visually inspect the system piping and components for damage
- Inspect the floor and wall seals, and seals around system piping penetrations, including checks for any additional areas requiring sealing
- Document any structural issues, upgrades, or changes to the Bullseye building
- Document the weather conditions on the day of the SSDS inspection
- Document the indoor air temperature and heating, ventilation, and air conditioning system (HVAC) settings at the time the system is inspected
- Confirm padlock is attached to the on/off switch
- Interview the owner or other appropriate personnel at Bullseye regarding any system operational issues
- Confirm that a copy of O&M Manual is in the building and update as necessary

Once annually, routine system monitoring will include collection of the following to ensure the readings fall within the design parameters:

- Vacuum measurements from the one monitoring point (SS-14-E)
- Vacuum measurements from the six sub-slab sampling points (SS-14-A through SS-14-C)
- Vacuum measurements from the two fans (EP-1 and EP-2)

Prior to completing any significant modifications to the building structure or HVAC, it is important that a representative of Bullseye consult a qualified contractor regarding the potential need to modify or upgrade the SSDS. Significant modifications might include but are not limited to building additions, reconfiguration of the Bullseye building's interior, and reconfiguration or replacement of the HVAC system. In the event the SSDS is not operating properly, Bullseye should either notify the Respondents or CRA. Contact information is provided in Section 7.

Section 6.0 Troubleshooting

By design, other than the fans and electrical system, the SSDS has relatively few components that could fail and affect operation. The system fans are designed by the manufacturer for a long operational lifespan. At the end of this lifespan, the fan should be replaced, as necessary, with an equivalent or better performance unit. Warranty information for the system fans is provided in Appendix D. In the event of failure of the SSDS electrical components (breakers, switches, etc.), the component should be repaired or replaced by a licensed electrical contractor. Where necessary, the subcontractor that installed the system could be contacted to discuss the problem. In the event the subcontractor is not able to assist in fixing the problem, a licensed subcontractor should be contacted to correct the problem and return the SSDS to normal operation. Other SSDS contacts are provided in Section 7.0.

The SSDS is connected directly to Bullseye building's electrical system. In the event that the fire alarm is activated or Bullseye building loses power, the SSDS is designed to shut off. Once power is restored to the building, the SSDS will require a manual restart. Once power is restored to the SSDS, it is recommended that each blower fan is inspected and determined to be operational.

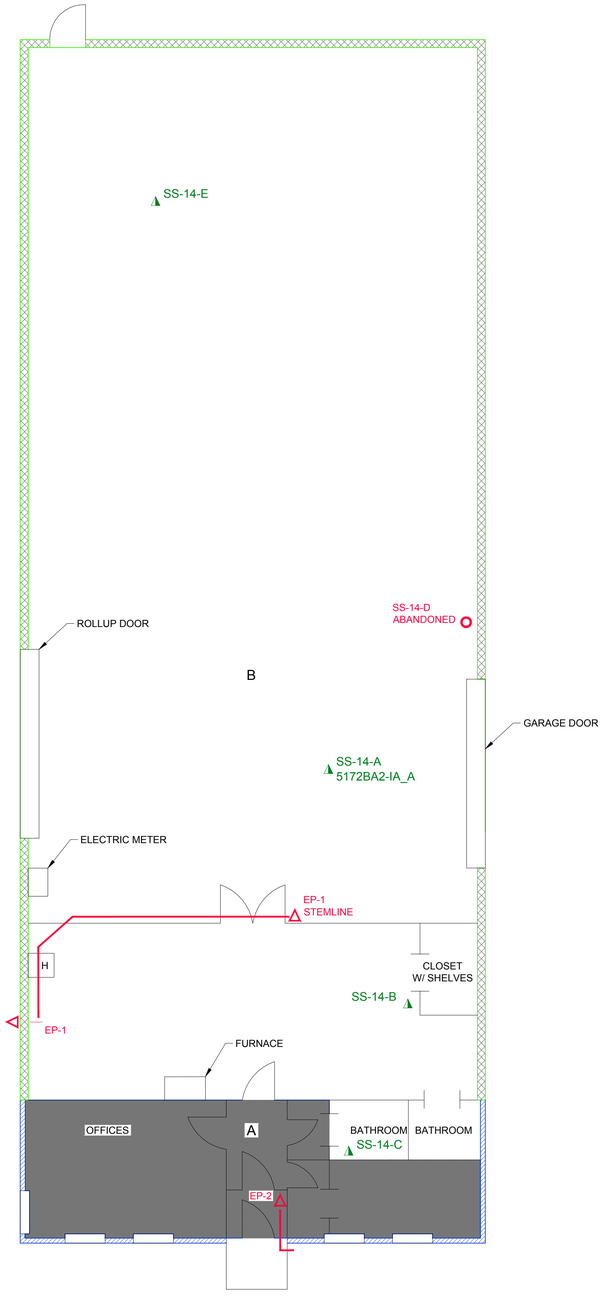
Section 7.0 Contact Information

The following is a list of contacts for use regarding the SSDS operation, maintenance, and monitoring:

SSDS Design Engineer & Environmental Consultant
Conestoga-Rovers & Associates, Inc.
Mr. Douglas Gatrell
Mrs. Nicole Shanks
14496 Sheldon Road
Suite 200
Plymouth, Michigan 48170
734-453-5123

SSDS Installation Contractor
Environmental Doctor
Brenden Gitzinger, Owner
438 Windsor Park Drive
Dayton, Ohio 45459
937-433-3475
bgitzinger@envirodoc.com

Drawing



LEGEND:

- EP-1 — SUCTION POINT LOCATION
- PIPING AND FAN LOCATION
- CP-1 — COMPLIANCE POINT LOCATION
- BRICK
- CONCRETE BLOCK
- INTERIOR WALL
- H — HEATER
- CARPET
- DOOR
- 5172-BA2-A — EXISTING SOIL VAPOR PROBE LOCATION

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY SIGNATURE

SCALE VERIFICATION: THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

No	Revision	Date	Initial

SOUTH DAYTON DUMP AND LANDFILL SITE
MORAINE, OHIO

SUB-SLAB DEPRESSURIZATION SYSTEM OM&M PLAN

2003 DRYDEN ROAD
PARCEL NUMBER 5172, BUILDING 14
SSDS LAYOUT

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:			Date: SEPTEMBER 2013
Project Manager: A. LONEY	Reviewed By: N. SHANKS	Designed By: N. SHANKS	Drawn By: D. CANFIELD
Scale: 1" = 6'	Project No: 38443-00	Report No: 025	Drawing No: GN-01

Tables

TABLE 1

HISTORIC SUB-SLAB ANALYTICAL RESULTS
BULLSEYE AMUSEMENT 2003 DRYDEN ROAD
SOUTH DAYTON DUMP AND LANDFILL SITE
MORAINE, OHIO

Sample Location:				*Building 14, Probe A*	*Building 14, Probe A*	*Building 14, Probe A*	*Building 14, Probe A*	*Building 14, Probe A*	*Building 14, Probe A*
Sample Location:				*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*
Sample Date:				*1/6/2012*	*1/6/2012*	*3/28/2012*	*8/2/2012*	*8/2/2012*	*8/2/2012*
					Duplicate				*Duplicate*
Parameter	***Units***	***ODH Sub-Slab Screening Levels (Non-residential) a***	***ODH Sub-Slab Action Levels (Non-residential) b***						
Volatile Organic Compounds									
1,1,1-Trichloroethane	ppb	NC	NC	0.70 U	0.83 U	1.0 U	6.1 U	--	--
1,1,2,2-Tetrachloroethane	ppb	NC	NC	0.80 U	0.95 U	2.1 U	12 U	--	--
1,1,2-Trichloroethane	ppb	NC	NC	0.38 U	0.45 U	1.9 U	11 U	--	--
1,1-Dichloroethane	ppb	160	1600	500[a]	320[a]	970[a]	4100[ab]	--	--
1,1-Dichloroethene	ppb	NC	NC	0.60 U	0.71 U	3.0 J	25 J	--	--
1,2,4-Trichlorobenzene	ppb	NC	NC	1.0 U	1.2 U	3.4 U	20 UJ	--	--
1,2,4-Trimethylbenzene	ppb	NC	NC	1.0 U	1.2 U	2.2 U	13 U	--	--
1,2-Dibromoethane (Ethylene dibromide)	ppb	NC	NC	0.36 U	0.43 U	1.5 U	8.9 U	--	--
1,2-Dichlorobenzene	ppb	NC	NC	0.96 U	1.1 U	2.4 U	14 U	--	--
1,2-Dichloroethane	ppb	NC	NC	0.62 U	0.74 U	1.6 U	9.5 U	--	--
1,2-Dichloroethene (total)	ppb	NC	NC	4.9	3.1 J	--	--	--	--
1,2-Dichloropropane	ppb	NC	NC	0.28 U	0.33 U	1.8 U	11 U	--	--
1,2-Dichlorotetrafluoroethane (CFC 114)	ppb	NC	NC	0.64 U	0.76 U	2.1 J	6.5 U	--	--
1,3,5-Trimethylbenzene	ppb	NC	NC	1.0 U	1.2 U	2.2 UJ	13 U	--	--
1,3-Butadiene	ppb	NC	NC	0.20 U	0.24 U	2.2 UJ	13 U	--	--
1,3-Dichlorobenzene	ppb	NC	NC	0.88 U	1.0 U	2.2 U	13 U	--	--
1,4-Dichlorobenzene	ppb	NC	NC	0.88 U	1.0 U	2.2 U	13 U	--	--
1,4-Dioxane	ppb	NC	NC	1.8 U	2.1 U	2.8 U	16 U	--	--
2,2,4-Trimethylpentane	ppb	NC	NC	0.72 U	0.86 U	22	98 J	--	--
2-Butanone (Methyl ethyl ketone) (MEK)	ppb	NC	NC	8.2 J	7.7 J	6.9 U	40 U	--	--
2-Chlorotoluene	ppb	NC	NC	0.94 U	1.1 U	2.2 U	13 U	--	--
2-Hexanone	ppb	NC	NC	0.78 U	0.93 U	2.0 U	12 U	--	--
2-Phenylbutane (sec-Butylbenzene)	ppb	NC	NC	0.94 U	1.1 U	2.2 U	13 U	--	--
4-Ethyl toluene	ppb	NC	NC	0.92 U	1.1 U	2.3 U	13 U	--	--
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ppb	NC	NC	0.52 U	0.62 U	3.9 J	9.1 U	--	--
Acetone	ppb	NC	NC	0.90 U	17 J	48 U	280 U	--	--
Allyl chloride	ppb	NC	NC	0.38 U	0.45 U	1.7 U	9.7 U	--	--
Benzene	ppb	20	200	1.9 J	1.8 J	6.0 J	50[a]	--	--
Benzyl chloride	ppb	NC	NC	0.92 U	1.1 U	2.7 U	16 U	--	--
Bromodichloromethane	ppb	NC	NC	0.56 U	0.67 U	1.5 U	8.9 U	--	--
Bromoform	ppb	NC	NC	0.38 U	0.45 U	1.7 U	9.7 U	--	--
Bromomethane (Methyl bromide)	ppb	NC	NC	0.24 U	0.29 U	1.1 U	6.5 U	--	--
Butane	ppb	NC	NC	180	150	920 J	3700	--	--
Carbon disulfide	ppb	NC	NC	16	14	25	45 J	--	--
Carbon tetrachloride	ppb	NC	NC	0.66 U	0.79 U	1.3 UJ	7.7 U	--	--
Chlorobenzene	ppb	NC	NC	0.40 U	0.48 U	1.7 U	9.9 U	--	--
Chlorodifluoromethane	ppb	NC	NC	2.9 J	2.7 J	9.1	23 J	--	--
Chloroethane	ppb	NC	NC	0.32 U	0.38 U	1.2 U	7.1 U	--	--

TABLE 1

HISTORIC SUB-SLAB ANALYTICAL RESULTS
BULLSEYE AMUSEMENT 2003 DRYDEN ROAD
SOUTH DAYTON DUMP AND LANDFILL SITE
MORAINE, OHIO

Sample Location:				*Building 14, Probe A*	*Building 14, Probe A*	*Building 14, Probe A*	*Building 14, Probe A*	*Building 14, Probe A*	*Building 14, Probe A*
Sample Location:				*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*
Sample Date:				*1/6/2012*	*1/6/2012*	*3/28/2012*	*8/2/2012*	*8/2/2012*	*8/2/2012*
					Duplicate				*Duplicate*
Parameter	*Units*	*ODH Sub-Slab Screening Levels (Non-residential) a*	*ODH Sub-Slab Action Levels (Non-residential) b*						
VOC's Continued									
Chloroform (Trichloromethane)	ppb	800	8000	0.62 U	0.74 U	1.3 U	7.7 U	--	--
Chloromethane (Methyl chloride)	ppb	NC	NC	0.26 U	0.31 U	5.5 UJ	32 U	--	--
cis-1,2-Dichloroethene	ppb	370	3700	2.6 J	1.5 J	6.9	110	--	--
cis-1,3-Dichloropropene	ppb	NC	NC	0.32 U	0.38 U	2.6 U	15 U	--	--
Cyclohexane	ppb	NC	NC	5.0	3.8 J	19	150	--	--
Cymene (p-Isopropyltoluene)	ppb	NC	NC	0.96 U	1.1 U	2.0 U	12 U	--	--
Dibromochloromethane	ppb	NC	NC	0.42 U	0.50 U	1.5 U	8.5 U	--	--
Dichlorodifluoromethane (CFC-12)	ppb	NC	NC	3.1 J	2.8 J	3.6 J	14 U	--	--
Ethylbenzene	ppb	2500	25000	0.44 U	0.52 U	2.4 U	14 U	--	--
Hexachlorobutadiene	ppb	NC	NC	1.3 U	1.5 U	2.7 U	16 UJ	--	--
Hexane	ppb	NC	NC	6.4	4.7 J	29	250	--	--
Isopropyl alcohol	ppb	NC	NC	0.74 U	0.88 U	5.3 J	8.9 U	--	--
Isopropyl benzene	ppb	NC	NC	0.62 U	0.74 U	2.1 U	12 U	--	--
m&p-Xylenes	ppb	2000	20000	0.96 U	1.1 U	4.2 U	24 U	--	--
Methyl methacrylate	ppb	NC	NC	0.26 U	0.31 U	2.7 U	16 U	--	--
Methyl tert butyl ether (MTBE)	ppb	NC	NC	0.32 U	0.38 U	5.9 U	34 U	--	--
Methylene chloride	ppb	NC	NC	1.0 J	1.1 J	1.6 U	9.1 U	--	--
Naphthalene	ppb	29	NC	1.7 U	2.0 U	3.1 U	18 UJ	--	--
N-Butylbenzene	ppb	NC	NC	1.1 U	1.3 U	1.6 U	9.3 U	--	--
N-Decane	ppb	NC	NC	-	--	--	11 U	--	--
N-Dodecane	ppb	NC	NC	-	--	--	16 UJ	--	--
N-Heptane	ppb	NC	NC	0.20 U	0.24 U	2.4 J	31 J	--	--
Nonane	ppb	NC	NC	-	-	-	8.7 U	--	--
N-Propylbenzene	ppb	NC	NC	1.0 U	1.2 U	1.9 U	11 U	--	--
N-Undecane	ppb	NC	NC	--	--	--	13 U	--	--
Octane	ppb	NC	NC	--	--	--	7.3 U	--	--
o-Xylene	ppb	2000	20000	0.44 U	0.52 U	2.2 J	12 U	--	--
Pentane	ppb	NC	NC	--	--	--	1300	--	--
Styrene	ppb	NC	NC	0.60 U	0.71 U	2.0 U	12 U	--	--
tert-Butyl alcohol	ppb	NC	NC	1.4 U	1.7 U	1.9 J	7.7 U	--	--
tert-Butylbenzene	ppb	NC	NC	0.94 U	1.1 U	2.3 U	13 U	--	--
Tetrachloroethene	ppb	250	2500	0.22 U	0.26 U	1.4 U	8.1 U	--	--
Tetrahydrofuran	ppb	NC	NC	0.36 U	0.43 U	2.2 U	13 U	--	--
Toluene	ppb	NC	NC	0.69 J	0.78 J	3.2 J	11 J	--	--
trans-1,2-Dichloroethene	ppb	NC	NC	2.2 J	1.6 J	5.3 J	35 J	--	--
trans-1,3-Dichloropropene	ppb	NC	NC	0.40 U	0.48 U	1.7 U	9.7 U	--	--
Trichloroethene	ppb	20	200	2.1 J	1.5 J	6.4 J	**36 J[a]**	--	--
Trichlorofluoromethane (CFC-11)	ppb	NC	NC	0.68 U	0.81 U	0.83 U	4.9 U	--	--
Trifluorotrichloroethane (Freon 113)	ppb	NC	NC	0.20 U	0.24 U	1.1 U	6.3 U	--	--
Vinyl bromide (Bromoethene)	ppb	NC	NC	0.38 U	0.45 U	1.2 U	7.1 U	--	--
Vinyl chloride	ppb	20	200	**84[a]**	**70[a]**	**820 J[ab]**	**5500[ab]**	--	--
Xylenes (total)	ppb	NC	NC	0.44 U	0.52 U	-	-	--	--

TABLE 1

HISTORIC SUB-SLAB ANALYTICAL RESULTS
BULLSEYE AMUSEMENT 2003 DRYDEN ROAD
SOUTH DAYTON DUMP AND LANDFILL SITE
MORAINE, OHIO

Sample Location:				*Building 14, Probe A*	*Building 14, Probe A*	*Building 14, Probe A*	*Building 14, Probe A*	*Building 14, Probe A*	*Building 14, Probe A*
Sample Location:				*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*
Sample Date:				*1/6/2012*	*1/6/2012*	*3/28/2012*	*8/2/2012*	*8/2/2012*	*8/2/2012*
					Duplicate				*Duplicate*
Parameter	*Units*	*ODH Sub-Slab Screening Levels (Non-residential) a*	*ODH Sub-Slab Action Levels (Non-residential) b*						
Gases									
Methane	%	0.5	0.5	--	--	--	0.19 U	0.19 U	--
Field Parameter									
Methane, field (unfiltered)	%	0.5	0.5	0.0 /0.0	0.0 /0.0	--	--	--	--
Methane, field (filtered)	%	0.5	0.5	--	--	0 /0.0	0.2 /0.3	--	0.3 /0.2

Notes:

ppb - parts per billion
J - The chemical was detected by the laboratory, the listed value is an approximate concentration
JN or NJ - The listed value of the tentatively identified compound is an approximate concentration
U - The chemical was not detected in the sample at the detection limit shown.
UJ - The chemical was not detected in the sample at the approximate detection limit shown.
NC - No criterion
-- Not applicable.
- Concentration was greater than applicable criteria.

TABLE 1

HISTORIC SUB-SLAB ANALYTICAL RESULTS
BULLSEYE AMUSEMENT 2003 DRYDEN ROAD
SOUTH DAYTON DUMP AND LANDFILL SITE
MORAINE, OHIO

Sample Location:				*Building 14, Probe B*	*Building 14, Probe B*	*Building 14, Probe B*	*Building 14, Probe B*	*Building 14, Probe C*	*Building 14, Probe C*	*Building 14, Probe C*	*Building 14, Probe C*
Sample Location:				*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*
Sample Date:				*1/6/2012*	*3/26/2012*	*3/27/2012*	*8/2/2012*	*1/6/2012*	*3/2/2012*	*3/27/2012*	*8/2/2012*
Parameter	*Units*	*ODH Sub-Slab Screening Levels (Non-residential) a*	*ODH Sub-Slab Action Levels (Non-residential) b*								
Volatile Organic Compounds											
1,1,1-Trichloroethane	ppb	NC	NC	0.28 U	--	0.056 J	0.12 J	0.18 J	--	0.29	0.34
1,1,2,2-Tetrachloroethane	ppb	NC	NC	0.32 U	--	0.061 U	0.12 U	0.16 U	--	0.061 U	0.061 U
1,1,2-Trichloroethane	ppb	NC	NC	0.15 U	--	0.054 U	0.11 U	0.076 U	--	0.054 U	0.054 U
1,1-Dichloroethane	ppb	160	1600	54	--	77	130	0.14 U	--	0.071 J	0.026 U
1,1-Dichloroethene	ppb	NC	NC	0.24 U	--	0.054 J	0.12 J	0.12 U	--	0.032 U	0.032 U
1,2,4-Trichlorobenzene	ppb	NC	NC	0.40 U	--	0.098 U	0.20 U	0.20 U	--	0.098 U	0.098 UJ
1,2,4-Trimethylbenzene	ppb	NC	NC	4.8	--	0.063 U	0.13 U	0.21 U	--	0.063 U	0.063 U
1,2-Dibromoethane (Ethylene dibromide)	ppb	NC	NC	0.14 U	--	0.044 U	0.088 U	0.072 U	--	0.044 U	0.044 U
1,2-Dichlorobenzene	ppb	NC	NC	0.38 U	--	0.070 U	0.14 U	0.19 U	--	0.070 U	0.070 U
1,2-Dichloroethane	ppb	NC	NC	0.25 U	--	0.047 U	0.094 U	0.12 U	--	0.047 U	0.047 U
1,2-Dichloroethene (total)	ppb	NC	NC	0.43 J	--	--	--	0.056 U	--	--	--
1,2-Dichloropropane	ppb	NC	NC	0.11 U	--	0.052 U	0.10 U	0.056 U	--	0.052 U	0.052 U
1,2-Dichlorotetrafluoroethane (CFC 114)	ppb	NC	NC	1.9	--	0.48	0.62	0.13 U	--	0.032 U	0.032 U
1,3,5-Trimethylbenzene	ppb	NC	NC	1.9	--	0.065 UJ	0.13 U	0.20 U	--	0.065 UJ	0.065 U
1,3-Butadiene	ppb	NC	NC	0.080 U	--	0.064 U	0.13 U	0.040 U	--	0.064 U	0.064 U
1,3-Dichlorobenzene	ppb	NC	NC	0.35 U	--	0.065 U	0.13 U	0.18 U	--	0.065 U	0.065 U
1,4-Dichlorobenzene	ppb	NC	NC	0.35 U	--	0.064 U	0.13 U	0.18 U	--	0.064 U	0.064 U
1,4-Dioxane	ppb	NC	NC	0.70 U	--	0.080 U	0.16 U	0.35 U	--	0.080 U	0.080 U
2,2,4-Trimethylpentane	ppb	NC	NC	0.29 U	--	0.18 J	0.078 U	0.14 U	--	0.039 U	0.039 U
2-Butanone (Methyl ethyl ketone) (MEK)	ppb	NC	NC	0.14 U	--	0.76 J	0.68 J	0.068 U	--	0.24 J	0.36 J
2-Chlorotoluene	ppb	NC	NC	0.38 U	--	0.063 U	0.13 U	0.19 U	--	0.063 U	0.063 U
2-Hexanone	ppb	NC	NC	0.31 U	--	0.058 U	0.12 U	0.16 U	--	0.058 U	0.058 U
2-Phenylbutane (sec-Butylbenzene)	ppb	NC	NC	0.38 U	--	0.064 U	0.13 U	0.19 U	--	0.064 U	0.064 U
4-Ethyl toluene	ppb	NC	NC	0.81 J	--	0.066 U	0.13 U	0.18 U	--	0.066 U	0.066 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ppb	NC	NC	0.21 U	--	0.045 U	0.090 U	0.10 U	--	0.045 U	0.045 U
Acetone	ppb	NC	NC	2.5 J	--	4.0 J	4.4 J	1.3 J	--	2.0 J	2.9 J
Allyl chloride	ppb	NC	NC	0.15 U	--	0.048 U	0.096 U	0.076 U	--	0.048 U	0.048 U
Benzene	ppb	20	200	0.14 U	--	0.077 J	0.11 U	0.072 U	--	0.056 U	0.056 U
Benzyl chloride	ppb	NC	NC	0.37 UJ	--	0.078 U	0.16 U	0.18 U	--	0.078 U	0.078 U
Bromodichloromethane	ppb	NC	NC	0.22 U	--	0.11 J	0.20 J	0.11 U	--	0.044 U	0.044 U
Bromoform	ppb	NC	NC	0.15 U	--	0.048 U	0.096 U	0.076 U	--	0.048 U	0.048 U
Bromomethane (Methyl bromide)	ppb	NC	NC	0.096 U	--	0.032 U	0.064 U	0.048 U	--	0.032 U	0.032 U
Butane	ppb	NC	NC	0.088 U	--	1.2	0.78 J	0.044 U	--	0.46	0.13 J
Carbon disulfide	ppb	NC	NC	0.53 U	--	0.11 J	0.11 J	0.26 U	--	0.031 U	0.058 J
Carbon tetrachloride	ppb	NC	NC	0.26 U	--	0.038 UJ	0.076 U	0.13 U	--	0.070 J	0.075 J
Chlorobenzene	ppb	NC	NC	0.16 U	--	0.049 U	0.098 U	0.080 U	--	0.049 U	0.049 U
Chlorodifluoromethane	ppb	NC	NC	0.27 U	--	0.84	1.8	0.14 U	--	0.32	0.40
Chloroethane	ppb	NC	NC	0.13 U	--	0.11 J	0.50	0.064 U	--	0.035 U	0.080 J

TABLE 1

HISTORIC SUB-SLAB ANALYTICAL RESULTS
BULLSEYE AMUSEMENT 2003 DRYDEN ROAD
SOUTH DAYTON DUMP AND LANDFILL SITE
MORAINE, OHIO

Sample Location:				*Building 14, Probe B*	*Building 14, Probe B*	*Building 14, Probe B*	*Building 14, Probe B*	*Building 14, Probe C*	*Building 14, Probe C*	*Building 14, Probe C*	*Building 14, Probe C*
Sample Location:				*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*
Sample Date:				*1/6/2012*	*3/26/2012*	*3/27/2012*	*8/2/2012*	*1/6/2012*	*3/2/2012*	*3/27/2012*	*8/2/2012*
Parameter	***Units***	***ODH Sub-Slab Screening Levels (Non-residential) a***	***ODH Sub-Slab Action Levels (Non-residential) b***								
VOC's Continued											
Chloroform (Trichloromethane)	ppb	800	8000	0.93 J	--	1.1	3.0	0.12 U	--	0.043 J	0.097 J
Chloromethane (Methyl chloride)	ppb	NC	NC	0.10 U	--	0.16 U	0.32 U	0.052 U	--	0.16 U	0.61
cis-1,2-Dichloroethene	ppb	370	3700	0.43 J	--	0.97	2.2	0.056 U	--	0.060 U	0.060 U
cis-1,3-Dichloropropene	ppb	NC	NC	0.13 U	--	0.074 U	0.15 U	0.064 U	--	0.074 U	0.074 U
Cyclohexane	ppb	NC	NC	0.31 U	--	0.27 J	0.080 U	0.16 U	--	0.39 J	0.040 U
Cymene (p-Isopropyltoluene)	ppb	NC	NC	0.38 U	--	0.057 U	0.11 U	0.19 U	--	0.057 U	0.057 U
Dibromochloromethane	ppb	NC	NC	0.17 U	--	0.042 U	0.084 U	0.084 U	--	0.042 U	0.042 U
Dichlorodifluoromethane (CFC-12)	ppb	NC	NC	1.2 J	--	1.1	0.77	0.50 J	--	0.51	0.48
Ethylbenzene	ppb	2500	25000	1.2 J	--	0.068 U	0.14 U	0.088 U	--	0.068 U	0.068 U
Hexachlorobutadiene	ppb	NC	NC	0.52 U	--	0.078 U	0.16 U	0.36 J	--	0.078 U	0.078 UJ
Hexane	ppb	NC	NC	0.21 U	--	0.32 J	0.15 J	0.10 U	--	0.94	0.049 J
Isopropyl alcohol	ppb	NC	NC	0.30 U	--	2.5	0.45 J	1.6 J	--	2.3	0.11 J
Isopropyl benzene	ppb	NC	NC	0.25 U	--	0.060 U	0.12 U	0.12 U	--	0.060 U	0.060 U
m&p-Xylenes	ppb	2000	20000	7.1	--	0.20	0.32 J	0.19 U	--	0.12 U	0.12 U
Methyl methacrylate	ppb	NC	NC	0.10 U	--	0.079 U	0.16 U	0.052 U	--	0.079 U	0.079 U
Methyl tert butyl ether (MTBE)	ppb	NC	NC	0.13 U	--	0.17 U	0.34 U	0.064 U	--	0.17 U	0.17 U
Methylene chloride	ppb	NC	NC	0.10 U	--	0.045 U	0.090 U	0.17 J	--	0.045 U	0.045 U
Naphthalene	ppb	29	NC	0.69 UJ	--	0.090 U	0.18 U	0.34 U	--	0.090 U	0.090 UJ
N-Butylbenzene	ppb	NC	NC	0.44 U	--	0.046 UJ	0.092 U	0.22 U	--	0.046 UJ	0.046 U
N-Decane	ppb	NC	NC	--	--	--	0.11 U	--	--	--	0.056 U
N-Dodecane	ppb	NC	NC	--	--	--	0.16 U	--	--	--	0.078 UJ
N-Heptane	ppb	NC	NC	0.080 U	--	0.10 J	0.094 U	0.040 U	--	0.064 J	0.047 U
Nonane	ppb	NC	NC	--	--	-	0.086 U	--	--	--	0.043 U
N-Propylbenzene	ppb	NC	NC	0.43 J	--	0.056 U	0.11 U	0.20 U	--	0.056 U	0.056 U
N-Undecane	ppb	NC	NC	--	--	--	0.12 U	--	--	--	0.062 U
Octane	ppb	NC	NC	--	--	--	0.072 U	--	--	--	0.036 U
o-Xylene	ppb	2000	20000	3.9	--	0.084 J	0.15 J	0.088 U	--	0.061 U	0.061 U
Pentane	ppb	NC	NC	--	--	--	0.12 U	--	--	--	0.11 J
Styrene	ppb	NC	NC	0.24 U	--	0.058 U	0.12 U	0.12 U	--	0.058 U	0.058 U
tert-Butyl alcohol	ppb	NC	NC	0.57 U	--	3.9	0.19 J	0.28 U	--	0.23 J	0.051 J
tert-Butylbenzene	ppb	NC	NC	0.38 U	--	0.066 U	0.13 U	0.19 U	--	0.066 U	0.066 U
Tetrachloroethene	ppb	250	2500	0.088 U	--	0.41	1.0	0.11 J	--	0.43	0.28
Tetrahydrofuran	ppb	NC	NC	0.14 U	--	0.73 J	0.13 U	0.072 U	--	0.11 J	0.063 U
Toluene	ppb	NC	NC	0.98 J	--	1.4	0.39 J	0.28 J	--	1.8	0.18 J
trans-1,2-Dichloroethene	ppb	NC	NC	0.26 U	--	0.050 U	0.10 U	0.13 U	--	0.050 U	0.050 U
trans-1,3-Dichloropropene	ppb	NC	NC	0.16 U	--	0.048 U	0.096 U	0.080 U	--	0.048 U	0.048 U
Trichloroethene	ppb	20	200	3.5	--	4.7	16	2.5	--	27[a]	1.2
Trichlorofluoromethane (CFC-11)	ppb	NC	NC	0.27 U	--	0.089 J	0.30 J	0.29 J	--	0.29	0.34
Trifluorotrichloroethane (Freon 113)	ppb	NC	NC	0.080 U	--	0.067 J	0.68	0.31 J	--	0.44	0.81
Vinyl bromide (Bromoethene)	ppb	NC	NC	0.15 U	--	0.035 U	0.070 U	0.076 U	--	0.035 U	0.035 U
Vinyl chloride	ppb	20	200	0.23 U	--	0.071 U	0.14 U	0.12 U	--	0.071 U	0.071 U
Xylenes (total)	ppb	NC	NC	11	--	--	--	0.088 U	--	--	--

TABLE 1

HISTORIC SUB-SLAB ANALYTICAL RESULTS
BULLSEYE AMUSEMENT 2003 DRYDEN ROAD
SOUTH DAYTON DUMP AND LANDFILL SITE
MORAINE, OHIO

Sample Location:				*Building 14, Probe B*	*Building 14, Probe B*	*Building 14, Probe B*	*Building 14, Probe B*	*Building 14, Probe C*	*Building 14, Probe C*	*Building 14, Probe C*	*Building 14, Probe C*
Sample Location:				*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*
Sample Date:				*1/6/2012*	*3/26/2012*	*3/27/2012*	*8/2/2012*	*1/6/2012*	*3/2/2012*	*3/27/2012*	*8/2/2012*
Parameter	***Units***	***ODH Sub-Slab Screening Levels (Non-residential) a***	***ODH Sub-Slab Action Levels (Non-residential) b***								
Gases											
Methane	%	0.5	0.5	--	--	--	0.20 U	0.066 U	--	--	0.20 U
Field Parameter											
Methane, field (unfiltered)	%	0.5	0.5	0.0 /0.0	--	--	--	0.0 /0.0	--	--	--
Methane, field (filtered)	%	0.5	0.5	--	0	0.0	0 /0	--	0	0.0	0 /0

Notes:

ppb - parts per billion
J - The chemical was detected by the laboratory, the listed value is an approximate concentration
JN or NJ - The listed value of the tentatively identified compound is an approximate concentration
U - The chemical was not detected in the sample at the detection limit shown.
UJ - The chemical was not detected in the sample at the approximate detection limit shown.
NC - No criterion
-- Not applicable.
[ ] - Concentration was greater than applicable criteria.

TABLE 2

HISTORIC INDOOR AIR ANALYTICAL RESULTS
BULLSEYE AMUSEMENT 2003 DRYDEN ROAD
SOUTH DAYTON DUMP AND LANDFILL SITE
MORAINE, OHIO

Sample Location:				*Building 14 Outdoor Air*	*Building 14 Outdoor Air*	*Building 14 Outdoor Air*	*Building 14, IA_A*	*Building 14, IA_A*
Sample Location:				*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*
Sample Date:				*1/6/2012*	*3/27/2012*	*8/2/2012*	*3/27/2012*	*8/2/2012*
Parameter	***Units***	***ODH Indoor Air Screening Levels (Non-residential) a***	***ODH Indoor Air Action Levels (Non-residential) b***					
Volatile Organic Compounds								
1,1,1-Trichloroethane	ppb	NC	NC	0.035 U	0.030 U	0.030 U	0.082 J	0.57
1,1,2,2-Tetrachloroethane	ppb	NC	NC	0.040 U	0.061 U	0.061 U	0.061 U	0.061 U
1,1,2-Trichloroethane	ppb	NC	NC	0.019 U	0.054 U	0.054 U	0.054 U	0.054 U
1,1-Dichloroethane	ppb	16	160	0.035 U	0.026 U	0.026 U	0.026 U	0.046 J
1,1-Dichloroethene	ppb	NC	NC	0.030 U	0.032 U	0.032 U	0.032 U	0.032 U
1,2,4-Trichlorobenzene	ppb	NC	NC	0.050 U	0.098 U	0.098 UJ	0.098 U	0.098 U
1,2,4-Trimethylbenzene	ppb	NC	NC	0.052 U	0.063 U	0.063 U	0.11 J	2.1
1,2-Dibromoethane (Ethylene dibromide)	ppb	NC	NC	0.018 U	0.044 U	0.044 U	0.044 U	0.044 U
1,2-Dichlorobenzene	ppb	NC	NC	0.048 U	0.070 U	0.070 U	0.070 U	0.070 U
1,2-Dichloroethane	ppb	NC	NC	0.031 U	0.047 U	0.047 U	0.047 U	0.047 U
1,2-Dichloroethene (total)	ppb	NC	NC	0.014 U	--	--	--	--
1,2-Dichloropropane	ppb	NC	NC	0.014 U	0.052 U	0.052 U	0.052 U	0.052 U
1,2-Dichlorotetrafluoroethane (CFC 114)	ppb	NC	NC	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U
1,3,5-Trimethylbenzene	ppb	NC	NC	0.051 U	0.065 UJ	0.065 U	0.065 UJ	0.58
1,3-Butadiene	ppb	NC	NC	0.010 U	0.064 U	0.064 U	0.55	1.4
1,3-Dichlorobenzene	ppb	NC	NC	0.044 U	0.065 U	0.065 U	0.065 U	0.065 U
1,4-Dichlorobenzene	ppb	NC	NC	0.044 U	0.064 U	0.064 U	0.064 U	0.083 J
1,4-Dioxane	ppb	NC	NC	0.088 U	0.080 U	0.080 U	0.080 U	0.080 U
2,2,4-Trimethylpentane	ppb	NC	NC	0.052 J	0.039 U	0.084 J	0.55	0.32 J
2-Butanone (Methyl ethyl ketone) (MEK)	ppb	NC	NC	0.29 J	0.38 J	0.56 J	1.7	8.1
2-Chlorotoluene	ppb	NC	NC	0.047 U	0.063 U	0.063 U	0.063 U	0.063 U
2-Hexanone	ppb	NC	NC	0.039 U	0.058 U	0.058 U	0.058 U	0.10 J
2-Phenylbutane (sec-Butylbenzene)	ppb	NC	NC	0.047 U	0.064 U	0.064 U	0.064 U	0.064 U
4-Ethyl toluene	ppb	NC	NC	0.046 U	0.066 U	0.066 U	0.066 U	0.56
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ppb	NC	NC	0.026 U	0.045 U	0.056 J	0.13 J	2.0
Acetone	ppb	NC	NC	1.2 J	1.4 U	5.3	7.7	35 J
Allyl chloride	ppb	NC	NC	0.019 U	0.048 U	0.048 U	0.048 U	0.048 U
Benzene	ppb	2	20	0.24	0.15 J	0.22	0.58	**2.4**[a]
Benzyl chloride	ppb	NC	NC	0.046 U	0.078 U	0.078 U	0.078 U	0.078 U
Bromodichloromethane	ppb	NC	NC	0.028 U	0.044 U	0.044 U	0.044 U	0.044 U
Bromoform	ppb	NC	NC	0.019 U	0.048 U	0.048 U	0.048 U	0.048 U
Bromomethane (Methyl bromide)	ppb	NC	NC	0.012 U	0.032 U	0.032 U	0.032 U	0.032 U
Butane	ppb	NC	NC	1.4	0.72	1.0	3.1	7.0
Carbon disulfide	ppb	NC	NC	0.066 U	0.031 U	0.13 J	0.35 J	0.30 J
Carbon tetrachloride	ppb	NC	NC	0.080 J	0.086 J	0.075 J	0.090 J	0.12 J
Chlorobenzene	ppb	NC	NC	0.020 U	0.049 U	0.049 U	0.049 U	0.049 U
Chlorodifluoromethane	ppb	NC	NC	0.25 J	0.32	0.40	0.27	0.60
Chloroethane	ppb	NC	NC	0.016 U	0.035 U	0.035 U	0.035 U	0.035 U

TABLE 2

HISTORIC INDOOR AIR ANALYTICAL RESULTS
BULLSEYE AMUSEMENT 2003 DRYDEN ROAD
SOUTH DAYTON DUMP AND LANDFILL SITE
MORAINE, OHIO

Sample Location:				*Building 14 Outdoor Air*	*Building 14 Outdoor Air*	*Building 14 Outdoor Air*	*Building 14, IA_A*	*Building 14, IA_A*
Sample Location:				*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*
Sample Date:				*1/6/2012*	*3/27/2012*	*8/2/2012*	*3/27/2012*	*8/2/2012*
Parameter	***Units***	***ODH Indoor Air Screening Levels (Non-residential) a***	***ODH Indoor Air Action Levels (Non-residential) b***					
VOC's Continued								
Chloroform (Trichloromethane)	ppb	80	800	0.049 J	0.038 U	0.038 U	0.038 U	0.15 J
Chloromethane (Methyl chloride)	ppb	NC	NC	0.51	0.57	0.69	0.87	1.9
cis-1,2-Dichloroethene	ppb	37	370	0.014 U	0.060 U	0.060 U	0.060 U	0.060 U
cis-1,3-Dichloropropene	ppb	NC	NC	0.016 U	0.074 U	0.074 U	0.074 U	0.074 U
Cyclohexane	ppb	NC	NC	0.055 J	0.040 U	0.078 J	0.29 J	0.37 J
Cymene (p-Isopropyltoluene)	ppb	NC	NC	0.048 U	0.057 U	0.057 U	0.057 U	0.21
Dibromochloromethane	ppb	NC	NC	0.021 U	0.042 U	0.042 U	0.042 U	0.042 U
Dichlorodifluoromethane (CFC-12)	ppb	NC	NC	0.49 J	0.42	0.52	0.44	0.64
Ethylbenzene	ppb	250	2500	0.058 J	0.068 U	0.075 J	0.21	1.2
Hexachlorobutadiene	ppb	NC	NC	0.065 U	0.078 U	0.078 UJ	0.078 U	0.078 U
Hexane	ppb	NC	NC	0.17 J	0.24 J	0.39 J	0.58	1.2
Isopropyl alcohol	ppb	NC	NC	0.037 U	0.21 J	0.53 J	2.8	9.3
Isopropyl benzene	ppb	NC	NC	0.031 U	0.060 U	0.060 U	0.060 U	0.13 J
m&p-Xylenes	ppb	200	2000	0.15 J	0.12 U	0.19 J	0.58	4.4
Methyl methacrylate	ppb	NC	NC	0.013 U	0.079 U	0.079 U	0.079 U	0.39 J
Methyl tert butyl ether (MTBE)	ppb	NC	NC	0.016 U	0.17 U	0.17 U	0.17 U	0.17 U
Methylene chloride	ppb	NC	NC	0.12 J	0.045 U	0.045 U	0.045 U	0.045 U
Naphthalene	ppb	2.9	NC	0.086 U	0.090 U	0.090 UJ	0.090 U	0.37 J
N-Butylbenzene	ppb	NC	NC	0.055 U	0.046 UJ	0.046 U	0.046 UJ	0.10 J
N-Decane	ppb	NC	NC	--	--	0.056 U	--	0.54 J
N-Dodecane	ppb	NC	NC	--	--	0.078 UJ	--	0.75 J
N-Heptane	ppb	NC	NC	0.085 J	0.093 J	0.19 J	0.49 J	2.6
Nonane	ppb	NC	NC	--	--	0.043 U	--	0.26 J
N-Propylbenzene	ppb	NC	NC	0.050 U	0.056 U	0.056 U	0.056 U	0.21 J
N-Undecane	ppb	NC	NC	--	--	0.062 U	--	2.0
Octane	ppb	NC	NC	--	--	0.077 J	--	0.52
o-Xylene	ppb	200	2000	0.051 J	0.061 U	0.062 J	0.19 J	1.7
Pentane	ppb	NC	NC	--	--	0.82 J	--	15
Styrene	ppb	NC	NC	0.030 U	0.058 U	0.058 U	0.058 U	0.62
tert-Butyl alcohol	ppb	NC	NC	0.071 U	0.038 U	0.038 U	0.50 J	0.94 J
tert-Butylbenzene	ppb	NC	NC	0.047 U	0.066 U	0.066 U	0.066 U	0.066 U
Tetrachloroethene	ppb	25	250	0.023 J	0.040 U	0.040 U	0.040 U	0.054 J
Tetrahydrofuran	ppb	NC	NC	0.018 U	0.063 U	0.063 U	0.18 J	0.063 U
Toluene	ppb	NC	NC	0.39	0.39	0.85	13	35
trans-1,2-Dichloroethene	ppb	NC	NC	0.032 U	0.050 U	0.050 U	0.091 J	0.36
trans-1,3-Dichloropropene	ppb	NC	NC	0.020 U	0.048 U	0.048 U	0.048 U	0.048 U
Trichloroethene	ppb	2	20	0.030 U	0.036 U	0.036 U	0.047 J	0.043 J
Trichlorofluoromethane (CFC-11)	ppb	NC	NC	0.21	0.20	0.29	0.22	0.47
Trifluorotrichloroethane (Freon 113)	ppb	NC	NC	0.076 J	0.068 J	0.071 J	0.14 J	0.99
Vinyl bromide (Bromoethene)	ppb	NC	NC	0.019 U	0.035 U	0.035 U	0.035 U	0.035 U
Vinyl chloride	ppb	2	20	0.029 U	0.071 U	0.071 U	0.071 U	0.071 U
Xylenes (total)	ppb	NC	NC	0.20	--	--	--	--

TABLE 2

HISTORIC INDOOR AIR ANALYTICAL RESULTS
BULLSEYE AMUSEMENT 2003 DRYDEN ROAD
SOUTH DAYTON DUMP AND LANDFILL SITE
MORAINE, OHIO

Sample Location:				*Building 14 Outdoor Air*	*Building 14 Outdoor Air*	*Building 14 Outdoor Air*	*Building 14, IA_A*	*Building 14, IA_A*
Sample Location:				*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*
Sample Date:				*1/6/2012*	*3/27/2012*	*8/2/2012*	*3/27/2012*	*8/2/2012*
Parameter	***Units***	***ODH Indoor Air Screening Levels (Non-residential) a***	***ODH Indoor Air Action Levels (Non-residential) b***					
Gases								
Methane	%	0.05	0.05	--	--	**0.21 U[ab]**	--	**0.21 U[ab]**
Field Parameter								
Methane, field (unfiltered)	%	0.05	0.05	0.0 /0.0	--	--	--	--
Methane, field (filtered)	%	0.05	0.05	--	0 /0.0	0 /0	0.0	0 /0

Notes:

ppb - parts per billion
J - The chemical was detected by the laboratory, the listed value is an approximate concentration
JN or NJ - The listed value of the tentatively identified compound is an approximate concentration
U - The chemical was not detected in the sample at the detection limit shown.
UJ - The chemical was not detected in the sample at the approximate detection limit shown.
NC - No criterion
-- Not applicable.
[ ] - Concentration was greater than applicable criteria.

TABLE 2

HISTORIC INDOOR AIR ANALYTICAL RESULTS
BULLSEYE AMUSEMENT 2003 DRYDEN ROAD
SOUTH DAYTON DUMP AND LANDFILL SITE
MORAINE, OHIO

Sample Location:				*Building 14, IA_B*	*Building 14, IA_B*	*Building 14, IA_C*	*Building 14, IA_C*	*Building 14, IA_C*
Sample Location:				*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*
Sample Date:				*3/27/2012*	*8/2/2012*	*3/26/2012*	*3/27/2012*	*8/2/2012*
Parameter	***Units***	***ODH Indoor Air Screening Levels (Non-residential) a***	***ODH Indoor Air Action Levels (Non-residential) b***					
Volatile Organic Compounds								
1,1,1-Trichloroethane	ppb	NC	NC	0.14 J	0.57	--	0.088 J	0.53
1,1,2,2-Tetrachloroethane	ppb	NC	NC	0.061 U	0.12 U	--	0.061 U	0.12 U
1,1,2-Trichloroethane	ppb	NC	NC	0.054 U	0.11 U	--	0.054 U	0.11 U
1,1-Dichloroethane	ppb	16	160	0.035 J	0.055 J	--	0.026 U	0.052 U
1,1-Dichloroethene	ppb	NC	NC	0.032 U	0.064 U	--	0.032 U	0.064 U
1,2,4-Trichlorobenzene	ppb	NC	NC	0.098 U	0.20 U	--	0.098 U	0.20 U
1,2,4-Trimethylbenzene	ppb	NC	NC	0.64	1.6	--	0.72	1.4
1,2-Dibromoethane (Ethylene dibromide)	ppb	NC	NC	0.044 U	0.088 U	--	0.044 U	0.088 U
1,2-Dichlorobenzene	ppb	NC	NC	0.070 U	0.14 U	--	0.070 U	0.14 U
1,2-Dichloroethane	ppb	NC	NC	0.047 U	0.094 U	--	0.047 U	0.094 U
1,2-Dichloroethene (total)	ppb	NC	NC	--	--	--	--	--
1,2-Dichloropropane	ppb	NC	NC	0.052 U	0.10 U	--	0.052 U	0.10 U
1,2-Dichlorotetrafluoroethane (CFC 114)	ppb	NC	NC	0.032 U	0.064 U	--	0.032 U	0.064 U
1,3,5-Trimethylbenzene	ppb	NC	NC	0.13 J	0.49	--	0.16 J	0.13 U
1,3-Butadiene	ppb	NC	NC	0.72	1.7	--	0.59	1.6
1,3-Dichlorobenzene	ppb	NC	NC	0.065 U	0.13 U	--	0.065 U	0.13 U
1,4-Dichlorobenzene	ppb	NC	NC	0.064 U	0.13 U	--	0.064 U	0.13 U
1,4-Dioxane	ppb	NC	NC	0.080 U	0.16 U	--	0.080 U	0.16 U
2,2,4-Trimethylpentane	ppb	NC	NC	0.12 J	0.30 J	--	0.096 J	0.30 J
2-Butanone (Methyl ethyl ketone) (MEK)	ppb	NC	NC	3.4	12	--	2.8	7.3
2-Chlorotoluene	ppb	NC	NC	0.063 U	0.13 U	--	0.063 U	0.13 U
2-Hexanone	ppb	NC	NC	0.058 U	0.12 U	--	0.058 U	0.12 U
2-Phenylbutane (sec-Butylbenzene)	ppb	NC	NC	0.064 U	0.13 U	--	0.064 U	0.13 U
4-Ethyl toluene	ppb	NC	NC	0.088 J	0.49 J	--	0.095 J	0.13 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ppb	NC	NC	0.21 J	1.6	--	0.23 J	1.7
Acetone	ppb	NC	NC	12	32 J	--	15	31 J
Allyl chloride	ppb	NC	NC	0.048 U	0.096 U	--	0.048 U	0.096 U
Benzene	ppb	2	20	0.67	**2.1[a]**	--	0.60	2.0
Benzyl chloride	ppb	NC	NC	0.078 U	0.16 U	--	0.078 U	0.16 U
Bromodichloromethane	ppb	NC	NC	0.044 U	0.088 U	--	0.044 U	0.088 U
Bromoform	ppb	NC	NC	0.048 U	0.096 U	--	0.048 U	0.096 U
Bromomethane (Methyl bromide)	ppb	NC	NC	0.032 U	0.064 U	--	0.032 U	0.064 U
Butane	ppb	NC	NC	4.2	7.7	--	3.5	6.5
Carbon disulfide	ppb	NC	NC	0.28 J	0.28 J	--	0.22 J	0.27 J
Carbon tetrachloride	ppb	NC	NC	0.090 J	0.11 J	--	0.090 J	0.12 J
Chlorobenzene	ppb	NC	NC	0.049 U	0.098 U	--	0.049 U	0.098 U
Chlorodifluoromethane	ppb	NC	NC	0.27	0.62	--	0.26	0.66
Chloroethane	ppb	NC	NC	0.035 U	0.070 U	--	0.035 U	0.070 U

TABLE 2

HISTORIC INDOOR AIR ANALYTICAL RESULTS
BULLSEYE AMUSEMENT 2003 DRYDEN ROAD
SOUTH DAYTON DUMP AND LANDFILL SITE
MORAINE, OHIO

Sample Location:				*Building 14, IA_B*	*Building 14, IA_B*	*Building 14, IA_C*	*Building 14, IA_C*	*Building 14, IA_C*
Sample Location:				*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*	*2003 Dryden Road*
Sample Date:				*3/27/2012*	*8/2/2012*	*3/26/2012*	*3/27/2012*	*8/2/2012*
Parameter	***Units***	***ODH Indoor Air Screening Levels (Non-residential) a***	***ODH Indoor Air Action Levels (Non-residential) b***					
VOC's Continued								
Chloroform (Trichloromethane)	ppb	80	800	0.038 U	0.18 J	--	0.038 U	0.15 J
Chloromethane (Methyl chloride)	ppb	NC	NC	1.1	2.3	--	0.97	1.7
cis-1,2-Dichloroethene	ppb	37	370	0.060 U	0.12 U	--	0.060 U	0.12 U
cis-1,3-Dichloropropene	ppb	NC	NC	0.074 U	0.15 U	--	0.074 U	0.15 U
Cyclohexane	ppb	NC	NC	0.33 J	0.50 J	--	0.31 J	0.40 J
Cymene (p-Isopropyltoluene)	ppb	NC	NC	0.061 J	0.15 J	--	0.084 J	0.16 J
Dibromochloromethane	ppb	NC	NC	0.042 U	0.084 U	--	0.042 U	0.084 U
Dichlorodifluoromethane (CFC-12)	ppb	NC	NC	0.42	0.68	--	0.43	0.72
Ethylbenzene	ppb	250	2500	0.32	0.95	--	0.33	0.81
Hexachlorobutadiene	ppb	NC	NC	0.078 U	0.16 U	--	0.078 U	0.16 U
Hexane	ppb	NC	NC	0.68	1.2	--	0.44 J	1.0
Isopropyl alcohol	ppb	NC	NC	6.2	10	--	6.1	10
Isopropyl benzene	ppb	NC	NC	0.060 U	0.12 U	--	0.060 U	0.12 U
m&p-Xylenes	ppb	200	2000	1.3	3.6	--	1.3	3.1
Methyl methacrylate	ppb	NC	NC	0.079 U	0.34 J	--	0.079 U	0.36 J
Methyl tert butyl ether (MTBE)	ppb	NC	NC	0.17 U	0.34 U	--	0.17 U	0.34 U
Methylene chloride	ppb	NC	NC	0.045 U	0.090 U	--	0.045 U	0.090 U
Naphthalene	ppb	2.9	NC	0.20 J	0.34 J	--	0.17 J	0.18 U
N-Butylbenzene	ppb	NC	NC	0.046 UJ	0.092 U	--	0.046 UJ	0.092 U
N-Decane	ppb	NC	NC	--	0.47 J	--	--	0.39 J
N-Dodecane	ppb	NC	NC	--	0.77 J	--	--	0.35 J
N-Heptane	ppb	NC	NC	0.89	4.2	--	0.67	2.7
Nonane	ppb	NC	NC	--	0.24 J	--	-	0.22 J
N-Propylbenzene	ppb	NC	NC	0.056 U	0.16 J	--	0.057 J	0.15 J
N-Undecane	ppb	NC	NC	--	1.7 J	--	--	1.5 J
Octane	ppb	NC	NC	--	0.64 J	--	--	0.46 J
o-Xylene	ppb	200	2000	0.48	1.4	--	0.47	1.2
Pentane	ppb	NC	NC	--	19	--	--	26
Styrene	ppb	NC	NC	0.083 J	0.55	--	0.094 J	0.47
tert-Butyl alcohol	ppb	NC	NC	0.56 J	0.84 J	--	0.38 J	0.97 J
tert-Butylbenzene	ppb	NC	NC	0.066 U	0.13 U	--	0.066 U	0.13 U
Tetrachloroethene	ppb	25	250	0.040 U	0.080 U	--	0.040 U	0.080 U
Tetrahydrofuran	ppb	NC	NC	0.10 J	0.13 U	--	0.063 U	0.13 U
Toluene	ppb	NC	NC	22	57	--	34	34
trans-1,2-Dichloroethene	ppb	NC	NC	0.17 J	0.44	--	0.10 J	0.42
trans-1,3-Dichloropropene	ppb	NC	NC	0.048 U	0.096 U	--	0.048 U	0.096 U
Trichloroethene	ppb	2	20	0.080 J	0.072 U	--	0.036 J	0.079 J
Trichlorofluoromethane (CFC-11)	ppb	NC	NC	0.25	0.48	--	0.23	0.47
Trifluorotrichloroethane (Freon 113)	ppb	NC	NC	0.20	1.1	--	0.14 J	0.96
Vinyl bromide (Bromoethene)	ppb	NC	NC	0.035 U	0.070 U	--	0.035 U	0.070 U
Vinyl chloride	ppb	2	20	0.071 U	0.14 U	--	0.071 U	0.14 U
Xylenes (total)	ppb	NC	NC	--	--	--	--	--

TABLE 2

HISTORIC INDOOR AIR ANALYTICAL RESULTS
BULLSEYE AMUSEMENT 2003 DRYDEN ROAD
SOUTH DAYTON DUMP AND LANDFILL SITE
MORAINE, OHIO

Sample Location:				***Building 14, IA_B***	***Building 14, IA_B***	***Building 14, IA_C***	***Building 14, IA_C***	***Building 14, IA_C***
Sample Location:				***2003 Dryden Road***	***2003 Dryden Road***	***2003 Dryden Road***	***2003 Dryden Road***	***2003 Dryden Road***
Sample Date:				***3/27/2012***	***8/2/2012***	***3/26/2012***	***3/27/2012***	***8/2/2012***
Parameter	***Units***	***ODH Indoor Air Screening Levels (Non-residential) a***	***ODH Indoor Air Action Levels (Non-residential) b***					
Gases								
Methane	%	0.05	0.05	--	**0.19 U[ab]**	--	--	**0.19 U[ab]**
Field Parameter								
Methane, field (unfiltered)	%	0.05	0.05	--	--	--	--	--
Methane, field (filtered)	%	0.05	0.05	0 /0.0	0 /0	0	0.0	0 /0

Notes:

ppb - parts per billion
J - The chemical was detected by the laboratory, the listed value is an approximate concentration
JN or NJ - The listed value of the tentatively identified compound is an approximate concentration
U - The chemical was not detected in the sample at the detection limit shown.
UJ - The chemical was not detected in the sample at the approximate detection limit shown.
NC - No criterion
-- Not applicable.
[ ] - Concentration was greater than applicable criteria.

TABLE 3

POST-MITIGATION RADIUS OF INFLUENCE VACUUM READINGS
BULLSEYE AMUSEMENT, 2003 DRYDEN ROAD
SOUTH DAYTON DUMP AND LANDFILL SITE
MORAINE, OHIO

Sub-Slab Sampling Probes	***Units***	***Date 1/7/2014***	***Date 1/24/2014***
SS-14-A	***in. wc***	-0.00723	-0.006
SS-14-B	***in. wc***	-0.0279	-0.0237
SS-14-C	***in. wc***	-0.5300	-0.575
Vacuum Monitoring Points			
SS-14-D	***in. wc***	--[1]	--[1]
SS-14-E	***in. wc***	-0.00376	+0.00410
Suction Points			
Ep-1	***in. wc***	-1.25	-1.5
Ep-2	***in. wc***	-2.75	-2.75

Notes:

in. wc - inches water column

--[1]- SS-14-D was abandoned and replaced with SS-14-E

TABLE 4

SUMMARY OF 30-DAY HYBRID PROFICIENCY SAMPLING ANALYTICAL RESULTS
BULLSEYE AMUSEMENT 2003 DRYDEN ROAD
SOUTH DAYTON DUMP AND LANDFILL SITE
MORAINE, OHIO

Sample Location:				*IA-14-A*	*IA-14-B*	*IA-14-C*	*OA-14*	*OA-17*	*SS-14-A*	*SS-14-A*
Sample ID:				*IA-38443-011614-GL-003*	*IA-38443-011614-GL-005*	*IA-38443-011614-GL-006*	*OA-38443-011614-GL-007*	*OA-38443-011614-GL-011*	*SS-38443-011614-GL-001*	*SS-38443-011614-GL-002*
Sample Date:				*1/16/2014*	*1/16/2014*	*1/16/2014*	*1/16/2014*	*1/16/2014*	*1/16/2014*	*1/16/2014*
										Duplicate
Parameter	*Units*	*Table 1 Non-Residential Soil Gas Screening Levels a*	*Table 1 Non-Residential Indoor Air Screening Levels b*							
Volatile Organic Compounds										
1,1,1-Trichloroethane	ppbv	NC	NC	0.078 J	0.12 J	0.081 J	0.030 U	0.030 U	0.060 U	0.060 U
1,1,2,2-Tetrachloroethane	ppbv	NC	NC	0.061 U	0.061 U	0.061 U	0.061 U	0.061 U	0.12 U	0.12 U
1,1,2-Trichloroethane	ppbv	NC	NC	0.054 U	0.054 U	0.054 U	0.054 U	0.054 U	0.11 U	0.11 U
1,1-Dichloroethane	ppbv	160	16	0.026 U	0.026 U	0.026 U	0.026 U	0.026 U	**270 J[a]**	160 J
1,1-Dichloroethene	ppbv	NC	NC	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.47	0.45
1,2,4-Trichlorobenzene	ppbv	NC	NC	0.098 U	0.098 U	0.098 U	0.098 U	0.098 U	0.20 U	0.20 U
1,2,4-Trimethylbenzene	ppbv	NC	NC	1.7	1.6	0.65	0.063 U	0.063 U	0.22 U	0.13 U
1,2-Dibromoethane (Ethylene dibromide)	ppbv	NC	NC	0.044 U	0.044 U	0.044 U	0.044 U	0.044 U	0.088 U	0.088 U
1,2-Dichlorobenzene	ppbv	NC	NC	0.070 U	0.070 U	0.070 U	0.070 U	0.070 U	0.14 U	0.14 U
1,2-Dichloroethane	ppbv	NC	NC	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.094 U	0.094 U
1,2-Dichloropropane	ppbv	NC	NC	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	0.10 U	0.10 U
1,2-Dichlorotetrafluoroethane (CFC 114)	ppbv	NC	NC	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.15 J	0.14 J
1,3,5-Trimethylbenzene	ppbv	NC	NC	0.54	0.48	0.21	0.065 U	0.065 U	0.13 U	0.13 U
1,3-Butadiene	ppbv	NC	NC	0.064 U	0.064 U	0.064 U	0.064 U	0.064 U	0.13 U	0.13 U
1,3-Dichlorobenzene	ppbv	NC	NC	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.13 U	0.13 U
1,4-Dichlorobenzene	ppbv	NC	NC	0.064 U	0.084 J	0.064 U	0.064 U	0.064 U	0.13 U	0.13 U
1,4-Dioxane	ppbv	NC	NC	0.080 U	0.080 U	0.080 U	0.080 U	0.080 U	0.16 U	0.16 U
2,2,4-Trimethylpentane	ppbv	NC	NC	0.45 J	0.32 J	0.45 J	0.039 U	0.039 U	0.089 J	0.078 U
2-Butanone (Methyl ethyl ketone) (MEK)	ppbv	NC	NC	1.1	2.0	0.65 J	0.20 U	0.20 U	0.47 J	0.40 U
2-Chlorotoluene	ppbv	NC	NC	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.13 U	0.13 U
2-Hexanone	ppbv	NC	NC	0.059 J	0.058 U	0.058 U	0.058 U	0.058 U	0.12 U	0.12 U
2-Phenylbutane (sec-Butylbenzene)	ppbv	NC	NC	0.064 U	0.064 U	0.064 U	0.064 U	0.064 U	0.13 U	0.13 U
4-Ethyl toluene	ppbv	NC	NC	0.67	0.47	0.25 J	0.066 U	0.066 U	0.13 U	0.13 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ppbv	NC	NC	0.28 J	0.29 J	0.045 U	1.6	0.11 J	0.090 U	0.090 U
Acetone	ppbv	NC	NC	7.2	9.0	8.4	1.4 J	1.5 J	4.7 J	2.8 U
Allyl chloride	ppbv	NC	NC	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	0.096 U	0.096 U
Benzene	ppbv	20	2	**3.2[b]**	**2.1[b]**	1.8	0.17 J	0.15 J	0.44	0.42
Benzyl chloride	ppbv	NC	NC	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.16 U	0.16 U
Bromodichloromethane	ppbv	NC	NC	0.044 U	0.044 U	0.044 U	0.044 U	0.044 U	0.14 J	0.12 J
Bromoform	ppbv	NC	NC	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	0.096 U	0.096 U
Bromomethane (Methyl bromide)	ppbv	NC	NC	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.064 U	0.064 U
Butane	ppbv	NC	NC	15	21	170	1.6	1.4	16	13
Carbon disulfide	ppbv	NC	NC	0.031 U	0.031 J	0.033 J	0.031 U	0.031 U	8.8	8.0
Carbon tetrachloride	ppbv	NC	NC	0.074 J	0.072 J	0.062 J	0.060 J	0.058 J	0.076 U	0.076 U
Chlorobenzene	ppbv	NC	NC	0.049 U	0.049 U	0.049 U	0.049 U	0.049 U	0.098 U	0.098 U
Chlorodifluoromethane	ppbv	NC	NC	0.037 U	0.037 U	0.17 J	0.20	0.21	0.074 U	0.074 U
Chloroethane	ppbv	NC	NC	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.29 J	0.73
Chloroform (Trichloromethane)	ppbv	800	80	0.038 U	0.038 U	0.038 J	0.038 U	0.038 U	5.4	5.5
Chloromethane (Methyl chloride)	ppbv	NC	NC	0.74	0.60	0.57	0.53	0.56	0.96 J	1.2
cis-1,2-Dichloroethene	ppbv	370	37	0.060 U	0.060 U	0.060 U	0.060 U	0.060 U	3.2	3.2
cis-1,3-Dichloropropene	ppbv	NC	NC	0.074 U	0.074 U	0.074 U	0.074 U	0.074 U	0.15 U	0.15 U
Cyclohexane	ppbv	NC	NC	0.57	0.79	0.29 J	0.072 J	0.040 U	0.33 J	0.39 J
Cymene (p-Isopropyltoluene)	ppbv	NC	NC	0.057 U	0.057 U	0.067 J	0.057 U	0.057 U	0.11 U	0.11 U
Dibromochloromethane	ppbv	NC	NC	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U	0.084 U	0.084 U

TABLE 4

SUMMARY OF 30-DAY HYBRID PROFICIENCY SAMPLING ANALYTICAL RESULTS
BULLSEYE AMUSEMENT 2003 DRYDEN ROAD
SOUTH DAYTON DUMP AND LANDFILL SITE
MORAINE, OHIO

Sample Location:				*IA-14-A*	*IA-14-B*	*IA-14-C*	*OA-14*	*OA-17*	*SS-14-A*	*SS-14-A*
Sample ID:				*IA-38443-011614-GL-003*	*IA-38443-011614-GL-005*	*IA-38443-011614-GL-006*	*OA-38443-011614-GL-007*	*OA-38443-011614-GL-011*	*SS-38443-011614-GL-001*	*SS-38443-011614-GL-002*
Sample Date:				*1/16/2014*	*1/16/2014*	*1/16/2014*	*1/16/2014*	*1/16/2014*	*1/16/2014*	*1/16/2014*
										Duplicate
Parameter	*Units*	*Table 1 Non-Residential Soil Gas Screening Levels a*	*Table 1 Non-Residential Indoor Air Screening Levels b*							
Volatile Organic Compounds										
Dichlorodifluoromethane (CFC-12)	ppbv	NC	NC	0.43	0.38	0.34	0.36	0.34	0.59	0.25 J
Ethylbenzene	ppbv	2500	250	1.8	1.6	0.88	0.068 U	0.068 U	0.14 J	0.14 U
Hexachlorobutadiene	ppbv	NC	NC	0.078 UJ	0.078 UJ	0.078 U	0.078 U	0.078 U	0.16 U	0.16 U
Hexane	ppbv	NC	NC	2.4	1.8	1.2	0.15 J	0.20 J	0.46 J	0.36 J
Isopropyl alcohol	ppbv	NC	NC	1.7 J	3.2	2.3	0.51 J	0.27 J	0.69 J	0.19 U
Isopropyl benzene	ppbv	NC	NC	0.13 J	0.12 J	0.060 U	0.060 U	0.060 U	0.12 U	0.12 U
m&p-Xylenes	ppbv	2000	200	6.2	5.4	2.9	0.17 J	0.13 J	0.48	0.24 U
Methyl methacrylate	ppbv	NC	NC	0.079 U	0.079 U	0.17 J	0.079 U	0.079 U	0.79 J	0.16 U
Methyl tert butyl ether (MTBE)	ppbv	NC	NC	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.34 U	0.34 U
Methylene chloride	ppbv	NC	NC	0.19 J	0.28 J	0.15 J	0.15 J	0.50	0.26 J	0.27 J
Naphthalene	ppbv	29	2.9	0.090 UJ	0.13 J	0.090 U	0.090 U	0.090 U	0.18 U	0.18 U
N-Butylbenzene	ppbv	NC	NC	0.11 J	0.12 J	0.046 U	0.046 U	0.046 U	0.092 U	0.092 U
N-Heptane	ppbv	NC	NC	1.3	1.0	0.72	0.12 J	0.14 J	0.28 J	0.11 J
N-Propylbenzene	ppbv	NC	NC	0.34 J	0.31 J	0.14 J	0.056 U	0.056 U	0.11 U	0.11 U
o-Xylene	ppbv	2000	200	2.2	1.9	1.0	0.061 U	0.061 U	0.20 J	0.12 U
Styrene	ppbv	NC	NC	0.21	0.28	0.13 J	0.058 U	0.058 U	0.12 U	0.12 U
tert-Butyl alcohol	ppbv	NC	NC	0.39 J	0.80 J	3.8	0.068 J	0.038 U	1.7 J	0.076 U
tert-Butylbenzene	ppbv	NC	NC	0.066 U	0.066 U	0.066 U	0.066 U	0.066 U	0.13 U	0.13 U
Tetrachloroethene	ppbv	250	25	0.28	0.058 U	0.047 U	0.049 U	0.040 U	0.11 J	3.8 J
Tetrahydrofuran	ppbv	NC	NC	1.0	1.1	0.44 J	0.26 J	0.063 U	0.13 U	0.13 U
Toluene	ppbv	NC	NC	8.3	7.8	5.4	0.29	0.29	0.52	0.26 J
trans-1,2-Dichloroethene	ppbv	NC	NC	0.093 J	0.34	0.13 J	0.050 U	0.050 U	0.72	0.67
trans-1,3-Dichloropropene	ppbv	NC	NC	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	0.096 U	0.096 U
Trichloroethene	ppbv	20	2	0.036 U	0.036 U	0.036 U	0.12 U	0.036 U	4.0	3.6
Trichlorofluoromethane (CFC-11)	ppbv	NC	NC	0.23	0.22	0.18 J	0.19 J	0.19 J	0.14 J	0.13 J
Trifluorotrichloroethane (Freon 113)	ppbv	NC	NC	0.15 J	0.18 J	0.15 J	0.065 J	0.060 J	0.077 J	0.070 J
Vinyl bromide (Bromoethene)	ppbv	NC	NC	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.070 U	0.070 U
Vinyl chloride	ppbv	20	2	0.071 U	0.071 U	0.071 U	0.071 U	0.071 U	4.9	4.5

Notes:
NC - No Criterion
J - Estimated.
U - Non-detect at associated value.
[ ] - Concentration was greater than applicable criteria.
ppbv - parts per billion by volume

Appendix A

Copy of Access Agreement

SITE ACCESS AGREEMENT

This Site Access Agreement is made this 24th day of August, 2006, by, among and between Kathryn A. Boesch and Margaret C. Grillot ("Licensors"), in favor of the South Dayton Dump Potentially Responsible Party ("PRP") Group.

WHEREAS, Licensors are the owners of property comprised of Lot Numbers 5171, 5172, 5173, 5174, 5175, 5176, 5177 and 5178 in Moraine, Ohio ("the Premises"); and

WHEREAS, the South Dayton Dump PRP Group wishes to conduct certain environmental investigation work at the Premises; and

NOW, THEREFORE, the parties agree as follows:

1. Grant of Access

Licensors hereby grant to the South Dayton Dump PRP Group, their contractors, agents, consultants, designees and representatives, a temporary right and license to enter upon the Premises at all reasonable times upon prior telephone notification to conduct site inspections as well as environmental soil and groundwater sampling in connection with a Remedial Investigation and Feasibility Study pursuant to the Administrative Settlement Agreement and Order on Consent ("ASAOC") for Remedial Investigation and Feasibility Study, CERCLA Docket Number V-W-06-C-852 under the oversight of the United States Environmental Protection Agency ("U.S. EPA") and the State of Ohio. Licensors further grant to the U.S. EPA, the State of Ohio, and their representatives and designees, including contractors, access at all reasonable

times to the Site for the purpose of conducting any activity related to the ASAOC described above.

2. Term of License

This Site Access Agreement and all rights granted hereunder, shall terminate upon completion of the Remedial Investigation and Feasibility Study pursuant to the ASAOC described above.

3. Non-Interference with Licensors' Use

In exercising its rights under this Site Access Agreement, the South Dayton Dump PRP Group shall, at all times, conduct its activities in such a way as to not interfere with the activities or operations of Licensors at the Premises or with other authorized uses of the Premises and shall honor all reasonable requests and instructions which are made to them by Licensors or other appropriate parties.

4. Indemnity

The South Dayton Dump PRP Group covenants and agrees to save and keep harmless and indemnify Licensors, their officers and from and against any and all liabilities, losses, damages, costs, expenses, causes of action, suits, penalties, claims, demands, and judgments of every kind and nature, including without limitation, reasonable attorney's fees and expenses for any personal injury or property damage to any building, structure, fixture, parking area or landscaping resulting or arising from the South Dayton Dump PRP Group activities hereunder.

5. Threats to Human Health or the Environment

If at any time during the performance of the work hereunder, the South Dayton Dump PRP Group or its agents discover any incident or condition that creates an emergency or danger to the health or safety of persons on or adjacent to the Premises, the South Dayton Dump PRP Group shall promptly notify Licensors of such incident or condition. If Licensors discover any such condition Licensors shall notify the South Dayton Dump PRP Group.

6. Restoration

Upon conclusion of its work, the South Dayton Dump PRP Group shall restore the Premises to the conditions existing immediately prior to the conduct of such work and in accordance with all applicable requirements.

Should the South Dayton Dump PRP Group's activities upon the Premises cause damage to any utilities, the cost of repair shall be the sole responsibility of the South Dayton Dump PRP Group, and repairs shall be made immediately.

7. Compliance with Laws

The South Dayton Dump PRP Group shall comply promptly and fully with all present and future laws and regulations in connection with its work hereunder.

8. Agreement to Limit Publicity

Neither the South Dayton Dump PRP Group, nor its agents, representatives, designees or contractors, shall discuss environmental conditions or its

investigative work at the Premises with any other person, entity, media organization, etc. without the express written consent of Licensors. The lone exceptions to this publicity rule will occur when South Dayton Dump PRP Group is required by law to disclose such information or as necessary to notify governmental authorities, obtain approval of an investigative or remediation plan from the appropriate governmental authority or submit reports or other documents to governmental authorities.

9. Construction and Intention

This Site Access Agreement is intended to be and shall be construed as a grant of temporary right of access and not an interest in the Premises.

10. Relationship of Parties

Nothing contained in this Site Access Agreement shall be deemed or construed by the parties, or any third party, as creating the relationship of principal and agent or of partnership or of joint venture between Licensors and South Dayton Dump PRP Group, it being understood and agreed that no provision contained in this Site Access Agreement, nor any acts of the parties shall be deemed to create any relationship between the parties hereto other than the relationship of Licensors to Licensee.

11. Captions

The captions in this Site Access Agreement are for convenience only and shall not be deemed to be a part hereof.

12. Governing Law

This Site Access Agreement shall be governed and construed in accordance with the laws of the State of Ohio. Any action to enforce the terms of this Site Access Agreement shall be brought in an appropriate court in Montgomery County, Ohio.

13. Amendment

This Site Access Agreement may not be modified or amended except by a written agreement duly executed by the parties hereto or by their respective successors or assigns, as the case may be. Licensors acknowledge that the U.S. EPA, Ohio EPA or their designees may require Licensee to undertake additional work not specified herein. In that event, Licensee shall confer with Licensors and amend, with Licensors' approval, this Site Access Agreement. Such approval shall not be unreasonably withheld.

14. Entire Agreement

This Site Access Agreement fully sets forth all agreements and understandings of the parties to this Site Access Agreement with respect to the subject matter hereof.

IN WITNESS WHEREOF, the parties have executed this Site Access Agreement on the day and year first above written.

LICENSORS

Timothy D. Hoffman

COUNSEL TO LICENSORS

Date: 9-26-06

LICENSORS CONTACT INFORMATION

Name: TIMOTHY D. HOFFMAN
Title: COUNSEL
Address: COOLIDGE WALL
33 W 1ST ST. STE 600
DAYTON 45402
Office Phone: 937 449-5540
Mobile Phone: 937 572-7817
Facsimile:
E-mail: HOFFMAN@COOLLAW.COM

LICENSEE

South Dayton Dump PRP Group

By: Kenneth Brown
Title: PRP Group Representative
Date: 8/24/2006

LICENSEE CONTACT INFORMATION

Ken Brown, CHMM
Environmental Engineer
Illinois Tool Works Inc.
3600 West Lake Avenue
Glenview, Illinois 60026
Office Phone: 847-657-4843
Mobile Phone: 847-224-9003
Facsimile: 847-657-7892
E-mail: kbrown@itw.com

Steve Quigley, P.E.
Principal
Conestoga-Rovers & Associates
651 Colby Drive
Waterloo, Ontario Canada N2V 1C2
Office Phone: 519-884-0510
Mobile Phone: 519-498-7997
Facsimile: 519-884-0525
E-mail: squigley@craworld.com

Appendix B

Mitigation Acceptance Letter

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
CINCINNATI, OHIO 45268

May 8, 2013

Tim Hoffman
Dinsmore & Shohl LLP
2003 Dryden Road (Building 14)
Moraine, Ohio 45439

Brian Clark
Bullseye Amusements
2003 Dryden Road
Moraine, Ohio 45439

Re: South Dayton Dump & Landfill Site
Vapor Abatement System Acceptance Form

As part of a vapor intrusion investigation in 2012 at the South Dayton Dump & Landfill (SDDL) Superfund Site located in Moraine, Ohio, Conestoga-Rovers & Associates (CRA), in working with United States Environmental Protection Agency (U.S. EPA), completed sub-slab and indoor air sampling at your property. The purpose of this letter is to inform you that trichloroethylene (TCE) was observed to be present in the sub-slab at a concentration as high as 36 parts per billion by volume (ppbv), which is greater than the Ohio Department of Health (ODH) sub-slab TCE screening level of 20 ppbv. In addition, TCE was observed in the indoor air at a concentration as high as 0.079 ppbv, which is less than the Agency for Toxic Substances and Disease Registry (ATSDR) and ODH indoor air TCE screening level of 2 ppbv. Vapor intrusion has the potential to occur at your property and you are eligible to receive a vapor abatement system to prevent vapor intrusion from occurring at your property.

While it is not known whether the identified vapor intrusion or potential vapor intrusion is tied to the historical activities at the SDDL Site, several companies believed to have disposed of waste at the SDDL Site and U.S. EPA are proceeding proactively with respect to the data and the responsive measures detailed in this letter.

As part of the U.S. EPA time-critical removal action at the SSDL Site, the potentially responsible parties (PRPs) at the SDDL Site propose to install a vapor abatement system at properties where vapor intrusion is occurring or has the potential to occur. If the system is accepted by the property owner, the PRPs will purchase the vapor abatement system and pay for the basic costs of installation. The PRPs' contractor, CRA, will design the system to vent the chemical vapors to concentrations less than the recommended indoor air screening levels established by ODH. The vapor abatement system includes PVC piping and an inline fan(s) to vent vapors from below the property foundation to above the roofline.

Following the installation of the vapor abatement system, the following will be performed or provided:

1) **Performance Air Sampling** – To ensure that the indoor air quality is below the ODH screening levels, CRA, on behalf of the PRPs, will conduct indoor air sampling at 30, 180 and 365 days after the system installation;

2) **Information Binder** – CRA, on behalf of the PRPs, will provide the property owner and the tenant (if necessary) a vapor abatement system information binder that will include a description of the vapor abatement system, photographs, historical sampling data, contact and fan warranty information;
3) **Annual Inspection** – Following successful performance sampling of the vapor abatement system, annual inspections will be conducted by CRA to ensure that the system is working properly.
4) **Electricity Stipend** – The PRPs will provide an electricity stipend (to the individual or company that pays for the electricity at the property) to off-set the cost of operating the system. The stipend will be a one-time payment, calculated based on assumed 5-year operation of the system, in the amount of $640. The need for an additional stipend will be evaluated at the end of the 5-year period based on the need for continued operation of the system.

Please sign below to indicate that you accept the described vapor abatement system or that you decline the described vapor abatement system for your property:

I agree to and **accept** the described system and the terms set forth above:

Name	Signature	Date
Tina Ortiz Agent for Owner		5/15/13

I have reviewed the above information and **decline** the described system:

Name	Signature	Date

Appendix C

Site Photographs

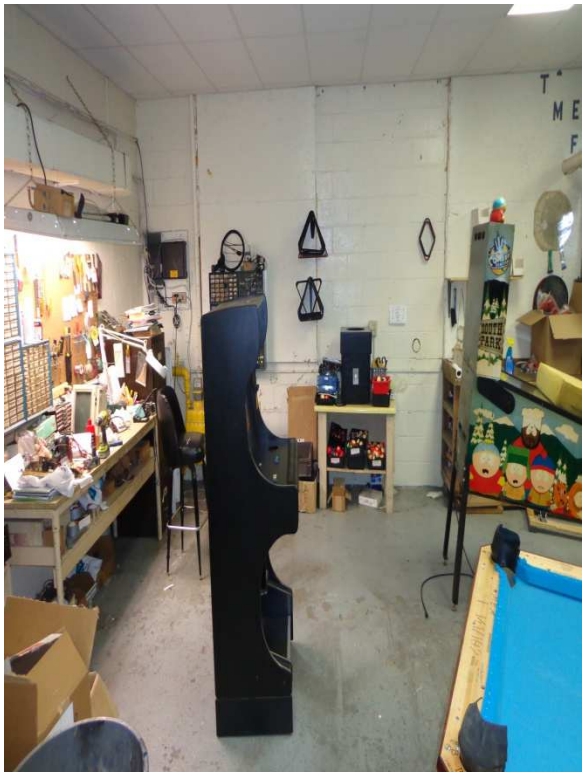


Photo 1: Installation location of system EP-1 suction point

Photo 2: Extration point thickness at system EP-1

Photo 3: Exterior installation location for system EP-1

Photo 4: Suction point installation for system EP-1

SITE PHOTOGRAPHS

Photo 5: Vacuum blower and exhaust stack for system EP-1

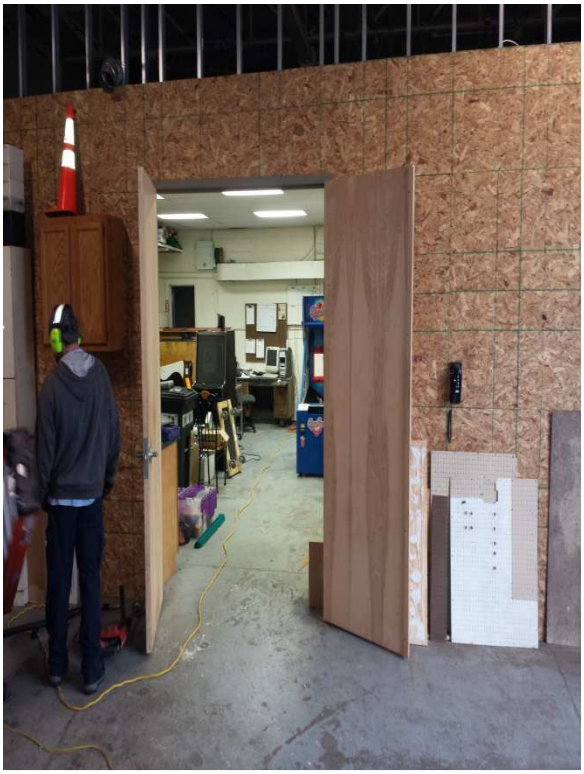


Photo 6: EP-1 stemline location.

Photo 7: Exterior installation location for system EP-2

Photo 8: Drilling through exterior wall to install EP-2

SITE PHOTOGRAPHS

Photo 9: Extration point thickness at EP-2

Photo 10: Suction point installed for EP-2

Photo 11: Vacuum blower and exhaust stack for EP-2

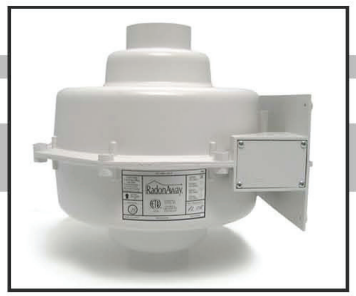
SITE PHOTOGRAPHS

Appendix D

Equipment Manuals and Final Inspection Report

RadonAway™

The World's Leading
Radon Fan Manufaturer



GP/XP/XR Series Installation Instructions

Please Read And Save These Instructions

DO NOT CONNECT POWER SUPPLY UNTIL FAN IS COMPLETELY INSTALLED. MAKE SURE ELECTRICAL SERVICE TO FAN IS LOCKED IN "OFF" POSITION. DISCONNECT POWER BEFORE SERVICING FAN.

1. **WARNING!** Do not use fan in hazardous environments where fan electrical system could provide ignition to combustible of flammable materials.
2. **WARNING!** Do not use fan to pump explosive or corrosive gases.
3. **WARNING!** Check voltage at the fan to insure it corresponds with nameplate.
4. **WARNING!** Normal operation of this device may affect the combustion airflow needed for safe operation of fuel burning equipment. Check for possible backdraft conditions on all combustion devices after installation.
5. **NOTICE!** There are no user serviceable parts located inside the fan unit. **Do NOT attempt to open.** Return unit to the factory for service.
6. All wiring must be performed in accordance with the National Fire Protection Association's (NFPA)"National Electrical Code, Standard #70"-current edition for all commercial and industrial work, and state and local building codes. All wiring must be performed by a qualified and licensed electrician.
7. **WARNING!** Do not leave fan unit installed on system piping without electrical power for more than 48 hours. Fan failure could result from this non-operational storage.
8. **WARNING - TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:**
   a) Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer.
   b) Before servicing or cleaning unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel

RadonAway
3 Saber Way | Ward Hill, MA 01835
www.radonaway.com

XP/XR Series		GP Series	
XP101	p/n 23008-1	GP201	p/n 23007-1
XP151	p/n 23010-1	GP301	p/n 23006-1
XP201	p/n 23011-1	GP401	p/n 23009-1
XR261	p/n 23019-1	GP501	p/n 23005-1

1.0 SYSTEM DESIGN CONSIDERATIONS

1.1 INTRODUCTION

The GP/XP/XR Series Radon Fans are intended for use by trained, professional Radon mitigators. The purpose of this instruction is to provide additional guidance for the most effective use of a fan. This instruction should be considered as a supplement to EPA standard practices, state and local building codes and state regulations. In the event of a conflict, those codes, practices and regulations take precedence over this instruction.

1.2 ENVIRONMENTALS

The GP/XP/XR Series Fans are designed to perform year-round in all but the harshest climates without additional concern for temperature or weather. For installations in an area of severe cold weather, please contact RadonAway for assistance. When not in operation, the fan should be stored in an area where the temperature is never less than 32 degrees F. or more than 100 degrees F.

1.3 ACOUSTICS

The GP/XP/XR Series Fan, when installed properly, operates with little or no noticeable noise to the building occupants. The velocity of the outgoing air should be considered in the overall system design. In some cases the "rushing" sound of the outlet air may be disturbing. In these instances, the use of a RadonAway Exhaust Muffler is recommended.

1.4 GROUND WATER

In the event that a temporary high water table results in water at or above slab level, water may be drawn into the riser pipes thus blocking air flow to the GP/XP/XR Series Fan. The lack of cooling air may result in the fan cycling on and off as the internal temperature rises above the thermal cutoff and falls upon shutoff. Should this condition arise, it is recommended that the fan be turned off until the water recedes allowing for return to normal operation.

1.5 SLAB COVERAGE

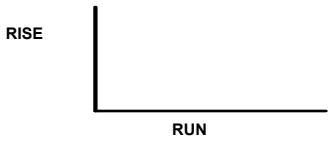
The GP/XP/XR Series Fan can provide coverage up to 2000+ sq. ft. per slab penetration. This will primarily depend on the sub-slab material in any particular installation. In general, the tighter the material, the smaller the area covered per penetration. Appropriate selection of the GP/XP/XR Series Fan best suited for the sub-slab material can improve the slab coverage. The GP & XP Series have a wide range of models to choose from to cover a wide range of subslab material. The higher static suction fans are generally used for tighter subslab materials. The XR Series is specifically designed for high flow applications such as stone/gravel and drain tile. Additional suction points can be added as required. It is recommended that a small pit (5 to 10 gallons in size) be created below the slab at each suction hole.

1.6 CONDENSATION & DRAINAGE

Condensation is formed in the piping of a mitigation system when the air in the piping is chilled below its dew point. This can occur at points where the system piping goes through unheated space such as an attic, garage or outside. The system design must provide a means for water to drain back to a slab hole to remove the condensation. The GP/XP/XR Series Fan **MUST** be mounted vertically plumb and level, with the outlet pointing up for proper drainage through the fan. Avoid mounting the fan in any orientation that will allow water to accumulate inside the fan housing. The GP/XP/XR Series Fans are **NOT** suitable for underground burial.

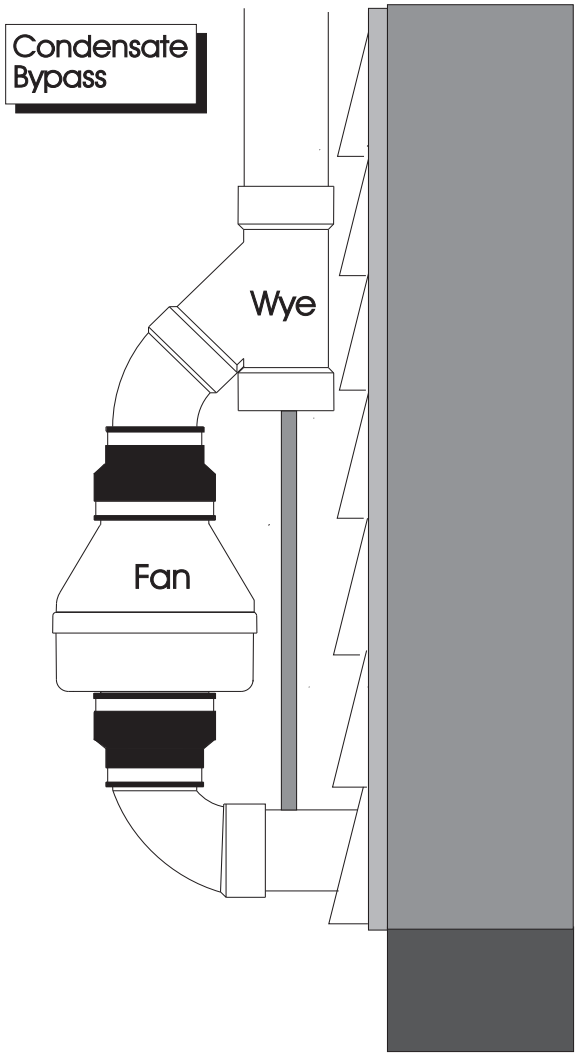
For GP/XP/XR Series Fan piping, the following table provides the minimum recommended pipe diameter and pitch under several system conditions.

Pipe Dia.	Minimum Rise per Foot of Run* @25 CFM	@50 CFM	@100 CFM
4″	1/8″	1/4″	3/8″
3"	1/4"	3/8"	1 1/2"



*Typical GP/XP/XR Series Fan operational flow rate is 25 - 90 CFM. (For more precision, determine flow rate by using the chart in the addendum.)

Under some circumstances in an outdoor installation a condensate bypass should be installed in the outlet ducting as shown. This may be particularly true in cold climate installations which require long lengths of outlet ducting or where the outlet ducting is likely to produce large amounts of condensation because of high soil moisture or outlet duct material. Schedule 20 piping and other thin-walled plastic ducting and Aluminum downspout will normally produce much more condensation than Schedule 40 piping.



The bypass is constructed with a 45 degree Wye fitting at the bottom of the outlet stack. The bottom of the Wye is capped and fitted with a tube that connects to the inlet piping or other drain. The condensation produced in the outlet stack is collected in the Wye fitting and drained through the bypass tube. The bypass tubing may be insulated to prevent freezing.

1.7 "SYSTEM ON" INDICATOR

A properly designed system should incorporate a "System On" Indicator for affirmation of system operation. A manometer, such as a U-Tube, or a vacuum alarm is recommended for this purpose.

1.8 ELECTRICAL WIRING

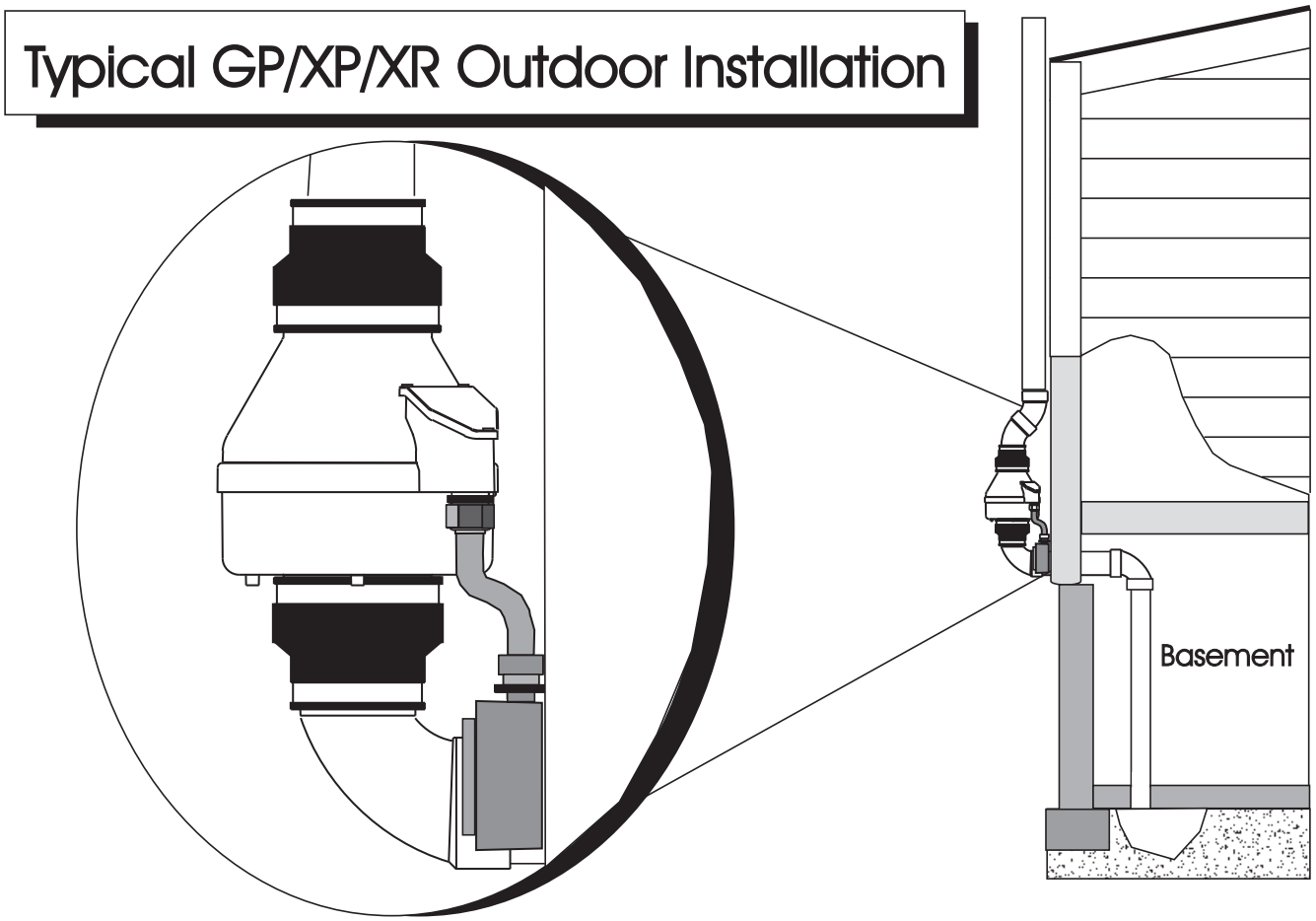
The GP/XP/XR Series Fans operate on standard 120V 60 Hz. AC. All wiring must be performed in accordance with the National Fire Protection Association's (NFPA)"National Electrical Code, Standard #70"-current edition for all commercial and industrial work, and state and local building codes. All wiring must be performed by a qualified and licensed electrician. Outdoor installations require the use of a U.L. listed watertight conduit. Ensure that all exterior electrical boxes are outdoor rated and properly sealed to prevent water penetration into the box. A means, such as a weep hole, is recommended to drain the box.

1.9 SPEED CONTROLS

The GP/XP/XR Series Fans are rated for use with electronic speed controls, however, they are generally not recommended. If used, the speed control recommended is Pass & Seymour Solid State Speed Control Cat. No. 94601-I.

2.0 INSTALLATION

The GP/XP/XR Series Fan can be mounted indoors or outdoors. (It is suggested that EPA recommendations be followed in choosing the fan location.) The GP/XP/XR Series Fan may be mounted directly on the system piping or fastened to a supporting structure by means of optional mounting bracket.



2.1 MOUNTING

Mount the GP/XP/XR Series Fan vertically with outlet up. Insure the unit is plumb and level. When mounting directly on the system piping assure that the fan does not contact any building surface to avoid vibration noise.

2.2 MOUNTING BRACKET (optional)

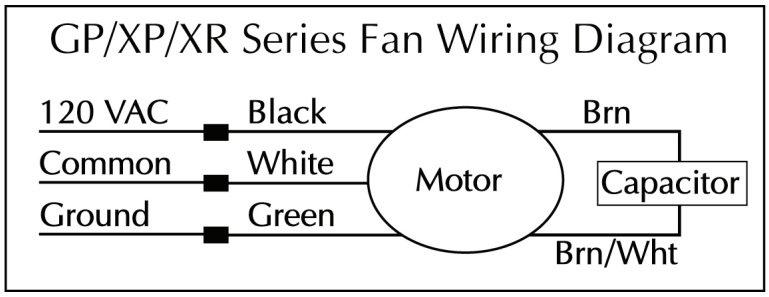
The GP/XP/XR Series Fan may be optionally secured with the integral mounting bracket on the GP Series fan or with RadonAway P/N 25007-2 mounting bracket for an XP/XR Series Fan. Foam or rubber grommets may also be used between the bracket and mounting surface for vibration isolation.

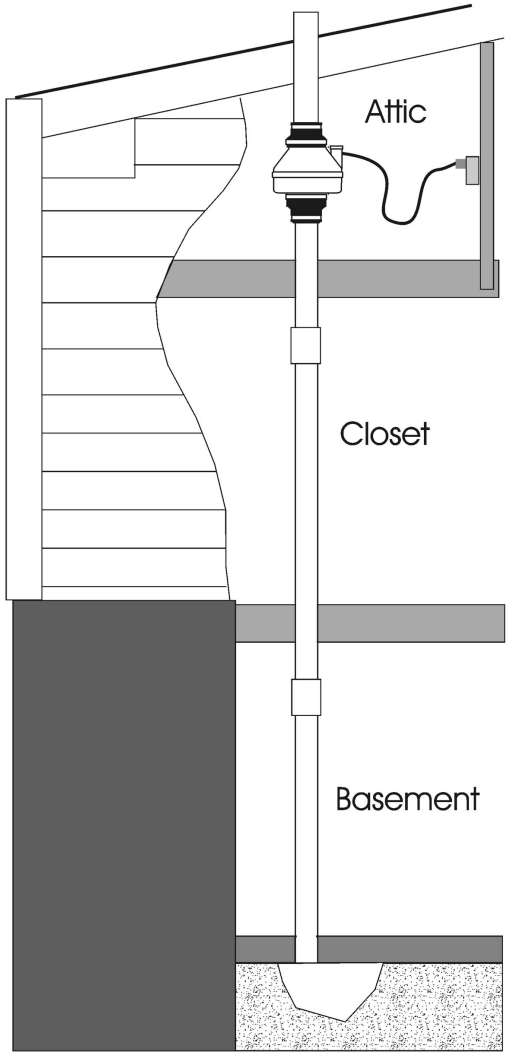
2.3 SYSTEM PIPING

Complete piping run, using flexible couplings as means of disconnect for servicing the unit and vibration isolation.

2.4 ELECTRICAL CONNECTION

Connect wiring with wire nuts provided, observing proper connections (See Section 1.8):





2.5 VENT MUFFLER (optional)

Install the muffler assembly in the selected location in the outlet ducting. Solvent weld all connections. The muffler is normally installed at the end of the vent pipe.

2.6 OPERATION CHECKS

_____ **Verify** all connections are tight and **leak-free**.

_____ **Insure** the GP/XP/XR Series Fan and all ducting is secure and vibration-free.

_____ **Verify** system vacuum pressure with manometer. **Insure** vacuum pressure is **less than** maximum recommended operating pressure
(*Based on sea-level operation, at higher altitudes reduce by about 4% per 1000 Feet.)*
(Further reduce Maximum Operating Pressure by 10% for High Temperature environments)
See Product Specifications. If this is exceeded, increase the number of suction points.

_____ **Verify Radon levels by testing to EPA protocol.**

XP/XR SERIES PRODUCT SPECIFICATIONS

The following chart shows fan performance for the XP & XR Series Fan:

Typical CFM Vs Static Suction "WC									
	0"	.25"	.5"	.75"	1.0"	1.25"	1.5"	1.75"	2.0"
XP101	125	118	90	56	5	-	-	-	-
XP151	180	162	140	117	78	46	10	-	-
XP201	150	130	110	93	74	57	38	20	-
XR261	250	215	185	150	115	80	50	20	-

Maximum Recommended Operating Pressure*		
XP101	0.9" W.C.	(Sea Level Operation)**
XP151	1.3" W.C.	(Sea Level Operation)**
XP201	1.7" W.C.	(Sea Level Operation)**
XR261	1.6" W.C.	(Sea Level Operation)**

**Reduce by 10% for High Temperature Operation*
***Reduce by 4% per 1000 feet of altitude*

Power Consumption @ 120 VAC	
XP101	40 - 49 watts
XP151	45 - 60 watts
XP201	45 - 66 watts
XR261	65 - 105 watts

XP Series Inlet/Outlet: 4.5" OD (4.0" PVC Sched 40 size compatible)
XR Series Inlet/Outlet: 5.875" OD
Mounting: Mount on the duct pipe or with optional mounting bracket.
Recommended ducting: 3" or 4" Schedule 20/40 PVC Pipe
Storage temperature range: 32 - 100 degrees F.
Normal operating temperature range: -20 - 120 degrees F.
Maximum inlet air temperature: 80 degrees F.
Size: 9.5H" x 8.5" Dia.
Weight: 6 lbs. (XR261 - 7 lbs)

Continuous Duty
Thermally Protected
Class B Insulation
3000 RPM
Rated for Indoor or Outdoor Use

LISTED Electric Fan ETL® 77728 Tested to UL Std. 507

GP SERIES PRODUCT SPECIFICATIONS

The following chart shows fan performance for the GP Series Fan:

Typical CFM Vs Static Suction "WC	1.0"	1.5"	2.0"	2.5"	3.0"	3.5"	4.0"
GP501	95	87	80	70	57	30	5
GP401	93	82	60	38	12	-	-
GP301	92	77	45	10	-	-	-
GP201	82	58	5	-	-	-	-

Maximum Recommended Operating Pressure*		
GP501	3.8" W.C.	(Sea Level Operation)**
GP401	3.0" W.C.	(Sea Level Operation)**
GP301	2.4" W.C.	(Sea Level Operation)**
GP201	1.8" W.C.	(Sea Level Operation)**

**Reduce by 10% for High Temperature Operation*

***Reduce by 4% per 1000 feet of altitude*

Power Consumption @ 120 VAC	
GP501	70 - 140 watts
GP401	60 - 110 watts
GP301	55 - 90 watts
GP201	40 - 60 watts

Inlet/Outlet: 3.5" OD (3.0" PVC Sched 40 size compatible)

Mounting: Fan may be mounted on the duct pipe or with integral flanges.

Weight: 12 lbs.

Size: 13H" x 12.5" x 12.5"

Recommended ducting: 3″ or 4" Schedule 20/40 PVC Pipe

Storage temperature range: 32 - 100 degrees F.

Normal operating temperature range: -20 - 120 degrees F.

Maximum inlet air temperature: 80 degrees F.

Continuous Duty

Class B Insulation

3000 RPM

Thermally Protected

Rated for Indoor or Outdoor Use

LISTED Electric Fan ETL® 77728 Tested to UL Std. 507

IMPORTANT INSTRUCTIONS TO INSTALLER

Inspect the GPx01/XP/XR Series Fan for shipping damage within 15 days of receipt. Notify RadonAway of any damages immediately. Radonaway is not responsible for damages incurred during shipping. However, for your benefit, Radonaway does insure shipments.

There are no user serviceable parts inside the fan. **Do not attempt to open.** Return unit to factory for service.

Install the GPx01/XP/XR Series Fan in accordance with all EPA standard practices, and state and local building codes and state regulations.

WARRANTY

Subject to any applicable consumer protection legislation, RadonAway warrants that the GPx01/XP/XR Series Fan (the "Fan") will be free from defects in materials and workmanship for a period of 90 days from the date of purchase (the "Warranty Term").

RadonAway will replace any Fan which fails due to defects in materials or workmanship. The Fan must be returned (at Owner's cost) to the RadonAway factory. Any Fan returned to the factory will be discarded unless the Owner provides specific instructions along with the Fan when it is returned regardless of whether or not the Fan is actually replaced under this warranty. Proof of purchase must be supplied upon request for service under this Warranty.

This Warranty is contingent on installation of the Fan in accordance with the instructions provided. This Warranty does not apply where any repairs or alterations have been made or attempted by others, or if the unit has been abused or misused. Warranty does not cover damage in shipment unless the damage is due to the negligence of RadonAway.

5 YEAR EXTENDED WARRANTY WITH PROFESSIONAL INSTALLATION.

RadonAway will extend the Warranty Term of the fan to 5 years from date of manufacture if the Fan is installed in a professionally designed and professionally installed radon system or installed as a replacement fan in a professionally designed and professionally installed radon system. Proof of purchase and/or proof of professional installation may be required for service under this warranty. Outside the Continental United States and Canada the extended Warranty Term is limited to one (1) year from the date of manufacture.

RadonAway is not responsible for installation, removal or delivery costs associated with this Warranty.

EXCEPT AS STATED ABOVE, THE GPx01/XP/XR SERIES FANS ARE PROVIDED WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

IN NO EVENT SHALL RADONAWAY BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING OUT OF, OR RELATING TO, THE FAN OR THE PERFORMANCE THEREOF. RADONAWAY'S AGGREGATE LIABILITY HEREUNDER SHALL NOT IN ANY EVENT EXCEED THE AMOUNT OF THE PURCHASE PRICE OF SAID PRODUCT. THE SOLE AND EXCLUSIVE REMEDY UNDER THIS WARRANTY SHALL BE THE REPAIR OR REPLACEMENT OF THE PRODUCT, TO THE EXTENT THE SAME DOES NOT MEET WITH RADONAWAY'S WARRANTY AS PROVIDED ABOVE.

For service under this Warranty, contact RadonAway for a Return Material Authorization (RMA) number and shipping information. No returns can be accepted without an RMA. If factory return is required, the customer assumes all shipping cost to and from factory.

RadonAway
3 Saber Way
Ward Hill, MA 01835
TEL. (978) 521-3703
FAX (978) 521-3964

Record the following information for your records:

Serial No._____
Purchase Date_____

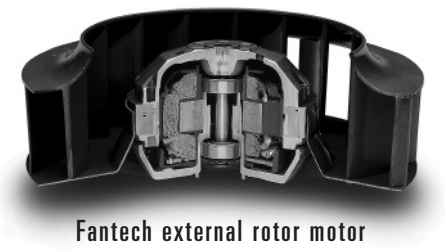
Fantech

HP SERIES

FANS FOR RADON APPLICATIONS
WITH IMPROVED UV RESISTANCE!

TRUST THE INDUSTRY STANDARD.
HERE'S WHY:

Don't put your reputation at stake by installing a fan you know won't perform like a Fantech! For nearly twenty years, Fantech has manufactured quality ventilation equipment for Radon applications. Fantech is the fan Radon contractors have turned to in over 1,000,000 successful Radon installations worldwide.



Fantech external rotor motor

FANTECH HP SERIES FANS MEET THE CHALLENGES OF RADON APPLICATIONS:

HOUSING
- UV resistant, UL Listed durable plastic
- UL Listed for use in commercial applications
- Factory sealed to prevent leakage
- Watertight electrical terminal box
- Approved for mounting in wet locations - i.e. Outdoors

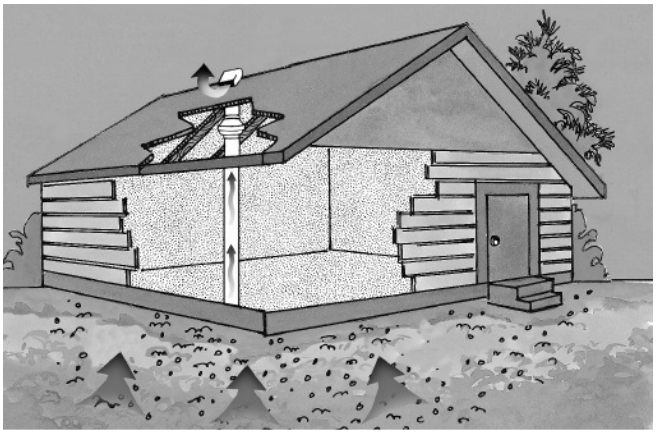
MOTOR
- Totally enclosed for protection
- High efficiency EBM motorized impeller
- Automatic reset thermal overload protection
- Average life expectancy of 7-10 years under continuous load conditions

RELIABILITY
- Five Year Full Factory Warranty
- Over 1,000,000 successful radon installations worldwide

Fantech

HP Series Fans are Specially Designed with Higher Pressure Capabilities for Radon Mitigation Applications

MOST RADON MITIGATORS WHO PREVIOUSLY USED THE FANTECH FR SERIES FANS HAVE SWITCHED TO THE NEW HP SERIES.



PERFORMANCE DATA

Fan Model	Volts	Wattage Range	Max. Amps	CFM vs. Static Pressure in Inches W.G.								Max. Ps
				0"	0.5"	0.75"	1.0"	1.25"	1.5"	1.75"	2.0"	
HP2133	115	14 - 20	0.17	134	68	19	-	-	-	-	-	0.84
HP2190	115	60 - 85	0.78	163	126	104	81	58	35	15	-	1.93
HP175	115	44 - 65	0.57	151	112	91	70	40	12	-	-	1.66
HP190	115	60 - 85	0.78	157	123	106	89	67	45	18	1	2.01
HP220	115	85 - 152	1.30	344	260	226	193	166	137	102	58	2.46

HVI MEMBER™

PERFORMANCE CURVES

Fantech provides you with independently tested performance specifications.

The performance curves shown in this brochure are representative of the actual test results recorded at Texas Engineering Experiment Station/Energy Systems Lab, a recognized testing authority for HVI. Testing was done in accordance with AMCA Standard 210-85 and HVI 916 Test Procedures. Performance graphs show air flow vs. static pressure.

Use of HP Series fans in low resistance applications such as bathroom venting will result in elevated sound levels. We suggest FR Series or other Fantech fans for such applications.

HP FEATURES INCLUDE

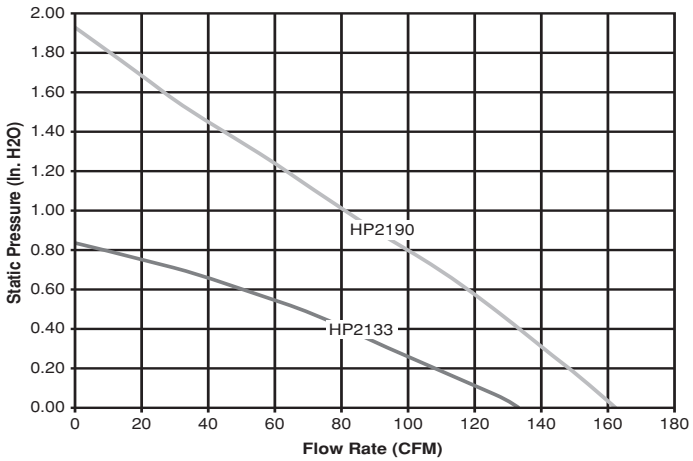
- Improved UV resistant housings approved for commercial applications.
- UL Approved for Wet Locations (Outdoors)
- Sealed housings and wiring boxes to prevent Radon leakage or water penetration
- Energy efficient permanent split capacitor motors
- External wiring box
- Full Five Year Factory Warranty

c UL us

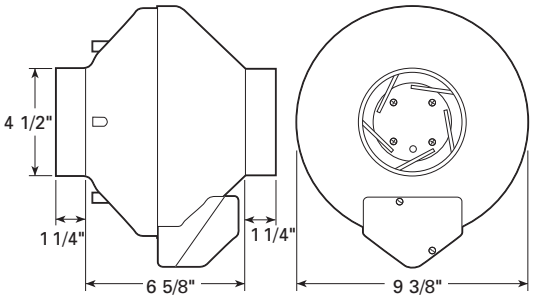
NOTE:

Installations that will result in condensate forming in the outlet ducting should have a condensate bypass installed to route the condensate outside of the fan housing. Conditions that are likely to produce condensate include but are not limited to: outdoor installations in cold climates, long lengths of outlet ducting, high moisture content in soil and thin wall or aluminum outlet ducting. Failure to install a proper condensate bypass may void any warranty claims.

HP2133 & HP2190 RADON MITIGATION FANS



Tested with 4" ID duct and standard couplings.

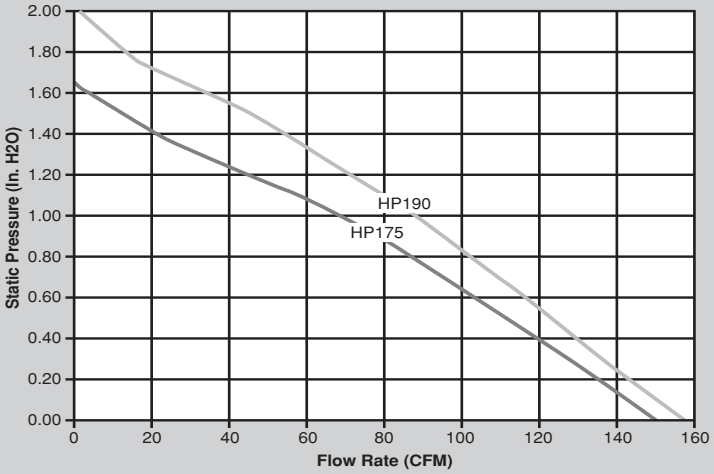


HP2133 – For applications where lower pressure and flow are needed. Record low power consumption of 14-20 watts! Often used where there is good sub slab communication and lower Radon levels.

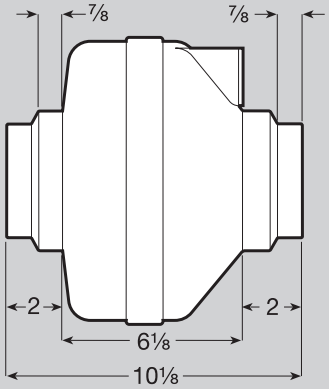
HP2190 – Performance like the HP190 but in a smaller housing. Performance suitable for the majority of installations.

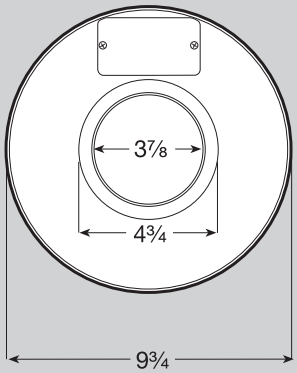
Fans are attached to PVC pipe using flexible couplings.
For 4" PVC pipe use Indiana Seals #156-44, Pipeconx PCX 56-44 or equivalent.
For 3" PVC pipe use Indiana Seals #156-43, Pipeconx PCX 56-43 or equivalent.

HP175 & HP190 RADON MITIGATION FANS



Tested with 4" ID duct and standard couplings.



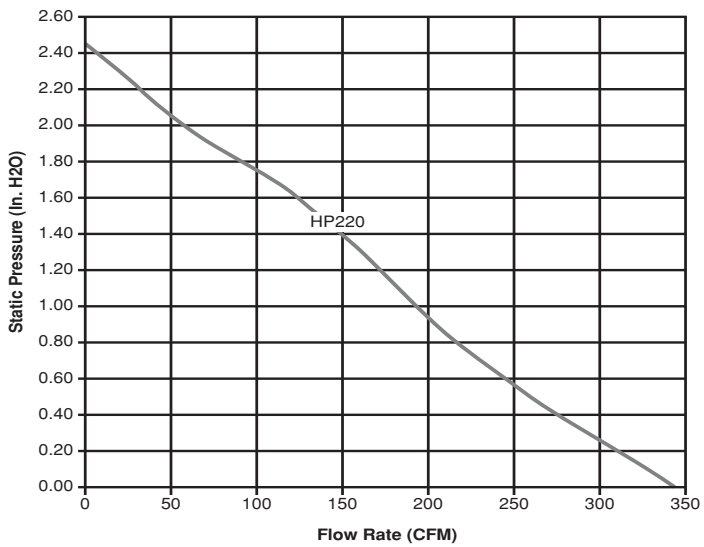


HP175 – The economical choice where slightly less air flow is needed. Often used where there is good sub slab communication and lower Radon levels.

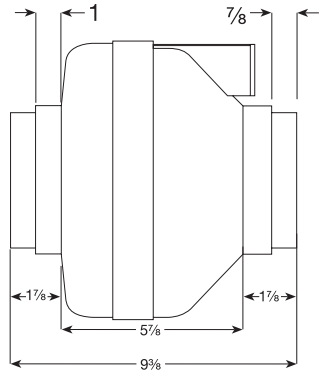
HP190 – The standard for Radon Mitigation. Ideally tailored performance curve for a vast majority of your mitigations.

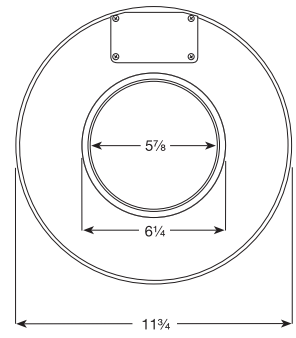
Fans are attached to PVC pipe using flexible couplings.
For 4" PVC pipe use Indiana Seals #151-44, Pipeconx PCX 51-44 or equivalent.
For 3" PVC pipe use Indiana Seals #156-43, Pipeconx PCX 56-43 or equivalent.

HP220 RADON MITIGATION FAN



Tested with 6" ID duct and standard couplings.





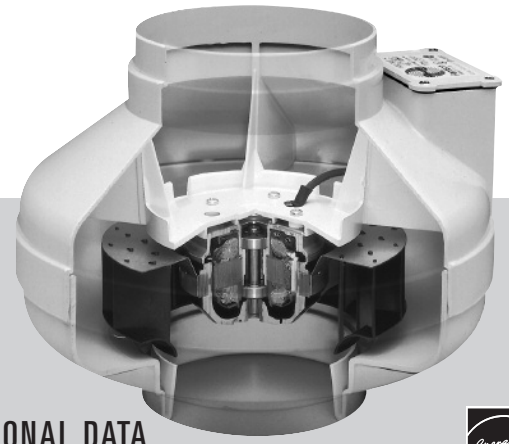
HP 220 – Excellent choice for systems with elevated radon levels, poor communication, multiple suction points and large subslab footprint. Replaces FR 175.

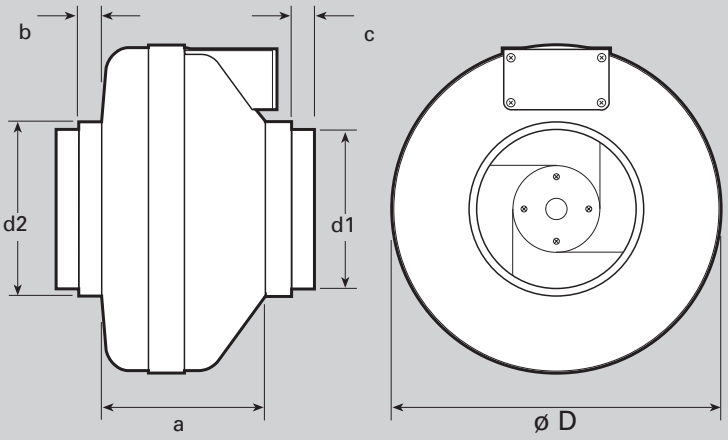
Fans are attached to PVC pipe using flexible couplings.
For 4" PVC pipe use Indiana Seals #156-64, Pipeconx PCX 56-64 or equivalent.
For 3" PVC pipe use Indiana Seals #156-63, Pipeconx PCX 56-63 or equivalent.

Fantech

FR SERIES

THE ORIGINAL MITIGATOR





DIMENSIONAL DATA

model	øD	d1	d2	a	b	c
FR100	9 1/2	3 7/8	4 7/8	6 1/8	7/8	7/8
FR110	9 1/2	3 7/8	4 7/8	6 1/8	7/8	7/8
FR125	9 1/2	–	4 7/8	6 1/8	7/8	–
FR140	11 3/4	5 7/8	6 1/4	5 7/8	1	7/8
FR150	11 3/4	5 7/8	6 1/4	5 7/8	1	7/8
FR160	11 3/4	5 7/8	6 1/4	6 3/8	1	7/8
FR200	13 1/4	7 7/8	9 7/8	6 1/4	1 1/2	1 1/2
FR225	13 1/4	7 7/8	9 7/8	6 1/4	1 1/2	1 1/2
FR250	13 1/4	–	9 7/8	6 1/4	–	1 1/2

All dimensions in inches

PERFORMANCE DATA

Fan Model	Energy Star	RPM	Volts	Rated Watts	Wattage Range	Max. Amps	CFM vs. Static Pressure in Inches W.G.							Max. Ps	Duct Dia.
							0"	.2"	.4"	.6"	.8"	1.0"	1.5"		
FR100	✓	2950	120	21.2	13 - 22	0.18	137	110	83	60	21	-	-	0.90"	4"
FR125	✓	2950	115	18	15 - 18	0.18	148	120	88	47	-	-	-	0.79"	5"
FR150	✓	2750	120	71	54 - 72	0.67	263	230	198	167	136	106	17	1.58"	6"
FR160	-	2750	115	129	103 - 130	1.14	289	260	233	206	179	154	89	2.32"	6"
FR200	✓	2750	115	122	106 - 128	1.11	408	360	308	259	213	173	72	2.14"	8"
FR225	✓	3100	115	137	111 - 152	1.35	429	400	366	332	297	260	168	2.48"	8"
FR250*	-	2850	115	241	146 - 248	2.40	649	600	553	506	454	403	294	2.58"	10"

FR Series performance is shown with ducted outlet. Per HVI's Certified Ratings Program, charted air flow performance has been derated by a factor based on actual test results and the certified rate at .2 inches WG.
** Also available with 8" duct connection. Model FR 250-8. Special Order.*

NOTE:

Installations that will result in condensate forming in the outlet ducting should have a condensate bypass installed to route the condensate outside of the fan housing. Conditions that are likely to produce condensate include but are not limited to: outdoor installations in cold climates, long lengths of outlet ducting, high moisture content in soil and thin wall or aluminum outlet ducting. Failure to install a proper condensate bypass may void any warranty claims.

FIVE YEAR WARRANTY

DURING ENTIRE WARRANTY PERIOD:

FANTECH will replace any fan which has a factory defect in workmanship or material. Product may need to be returned to the Fantech factory, together with a copy of the bill of sale and identified with RMA number.

FOR FACTORY RETURN YOU MUST:

- Have a Return Materials Authorization (RMA) number. This may be obtained by calling FANTECH either in the USA at 1.800.747.1762 or in CANADA at 1.800.565.3548. Please have bill of sale available.
- The RMA number must be clearly written on the outside of the carton, or the carton will be refused.
- All parts and/or product will be repaired/replaced and shipped back to buyer; no credit will be issued.

OR

The Distributor may place an order for the warranty fan and is invoiced.
The Distributor will receive a credit equal to the invoice only after product is returned prepaid and verified to be defective.

FANTECH WARRANTY TERMS DO NOT PROVIDE FOR REPLACEMENT WITHOUT CHARGE PRIOR TO INSPECTION FOR A DEFECT. REPLACEMENTS ISSUED IN ADVANCE OF DEFECT INSPECTION ARE INVOICED, AND CREDIT IS PENDING INSPECTION OF RETURNED MATERIAL. DEFECTIVE MATERIAL RETURNED BY END USERS SHOULD NOT BE REPLACED BY THE DISTRIBUTOR WITHOUT CHARGE TO THE END USER, AS CREDIT TO DISTRIBUTOR'S ACCOUNT WILL BE PENDING INSPECTION AND VERIFICATION OF ACTUAL DEFECT BY FANTECH.

THE FOLLOWING WARRANTIES DO NOT APPLY:

- Damages from shipping, either concealed or visible. Claim must be filed with freight company.
- Damages resulting from improper wiring or installation.
- Damages or failure caused by acts of God, or resulting from improper consumer procedures, such as:

1. Improper maintenance
2. Misuse, abuse, abnormal use, or accident, and
3. Incorrect electrical voltage or current.

- Removal or any alteration made on the FANTECH label control number or date of manufacture.
- Any other warranty, expressed, implied or written, and to any consequential or incidental damages, loss or property, revenues, or profit, or costs of removal, installation or reinstallation, for any breach of warranty.

WARRANTY VALIDATION

- The user must keep a copy of the bill of sale to verify purchase date.
- These warranties give you specific legal rights, and are subject to an applicable consumer protection legislation. You may have additional rights which vary from state to state.

DISTRIBUTED BY:

Fantech

United States 10048 Industrial Blvd. • Lenexa, KS 66215 • 1.800.747.1762 • www.fantech.net
Canada 50 Kanalflakt Way • Bouctouche, NB E4S 3M5 • 1.800.565.3548 • www.fantech.net

Item #: 411741
Rev Date: 021010

National Inspection Corporation

INSPECTION REPORT

QUESTIONS PLEASE CALL 937-433-4642
plans@natinspect.com FAX 937-433-0949 888-433-4642

JURISDICTION: Madison DATE 11/22/13

ADDRESS: 9003 Dry Run Rd

Y Approved N Not Approved

TEMP POLE		ROUGH ELECT		FIRE ALARM	
FOOTER		ROUGH HVAC		FIRE SUPPRESSION	
FOUNDATION		ROUGH FRAMING		FINAL ELECT	Y
BACK FILL		INSULATION		FINAL HVAC	
CRAWL SPACE		GAS TEST		FINAL BUILDING	
SLAB		SERVICE RELEASE			
SPRINKLER SYSTEM :		HYDRO		SPRINKLER FINAL	

JOB NOTES	

TIME 8:45 INSPECTOR

Appendix E

Operation Maintenance and Monitoring (OM&M) Checklist

ROUTINE INSPECTION CHECKLIST
BULLSEYE AMUSEMENTS
2003 DRYDEN ROAD, BUILDING 14
SOUTH DAYTON DUMP AND LANDFILL SITE
MORAINE, OHIO

Inspection Date _____

Inspector's Name _____

Inspector's Affiliation _____

PART 1 - ROUTINE QUARTERLY INSPECTIONS **General System Operation**		
SSDS Exterior Fan Operation *(circle the appropriate observed condition)*		
EP-1	Operating	Not Operating
EP-2	Operating	Not Operating
Discharge Vent Piping	Intact	Damaged
Exterior Caulking	Intact	Damaged

SSDS Interior System Components *(circle the observed condition for each system component)*		
Discharge Sampling Ports - General	Intact	Damaged
Audible Vacuum Leaks Near/From Extraction Points	Yes	No
Water Present/Water Damage Observed Near Extraction Points	Yes	No
Electrical System Components	Intact	Damaged
Observable Caulking	Intact	Damaged
Inspection of Vacuum Gauges	Intact	Damaged
Floor Conditions near Extraction Points (i.e. Cracking, etc.)	Intact	Damaged
Labeling of SSDS System and Electrical Components	Intact	Damaged

SSDS System Monitoring and Sample Point Inspection *(record vacuum measurements and note whether its operating within acceptable range)*		
Component Identification	Vacuum Measurements	Vacuum Outside of Range*
EP-1		Yes No
EP-1 Stemline		Yes No
EP-2		Yes No

*** Note: The acceptable vacuum range for each EP Fan is 0.5 to 4 inches of water. If vacuum is outside this range, call for service.**

ROUTINE INSPECTION CHECKLIST
BULLSEYE AMUSEMENTS
2003 DRYDEN ROAD, BUILDING 14
SOUTH DAYTON DUMP AND LANDFILL SITE
MORAINE, OHIO

Please include any comments or observations here. At a minimum, if you answered 'damaged' or 'not operating' to any of the checklist items above, please provide further information.

Have any modifications or upgrades been made to the heating, ventilation, or air conditioning (HVAC) system since the last inspection?	Yes	No

If yes, please explain the changes made to the HVAC system.

Have any changes or upgrades been made to the building or has any new construction occurred since the last inspection?	Yes	No

If so, please explain the changes made to the building system.

Note: Stop here if this is a quarterly inspection. If completing an Annual Inspection, please complete the following

PART 2 - ANNUAL INSPECTION **SSDS System Monitoring and Sample Point Inspection**		
Sub-Slab/Monitoring Point Identification	Vacuum Measurement *(inches of water)*	Damaged, Leaking, or Vacuum Outside of Range*
SS-14-A		Yes No
SS-14-B		Yes No
SS-14-C		Yes No
SS-14-E		Yes No

***Note: Vacuum should exceed 0.004 inches water column at each location. The optimal range is 0.0161 to 1.2 inches of water column.**
If vacuum is below 0.001 inches water column, call for service.

Please include any comments or observations here. If you answer 'yes' to any of the checklist items above, please provide further explanation.